Reducing Infant Mortality
In Leicester, Leicestershire and Rutland

2016 – 2019
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Introduction

This strategy has been developed by a range of partner organisations who have come together to form the Infant Mortality Strategy Group (IMSG), in recognition of the importance of this issue for Leicester, Leicestershire and Rutland (LLR).

The strategy recognises the work already undertaken and issues addressed by existing strategies and groups, as well as identifying the collective action to be taken across LLR with the aim to reduce the incidence of infant mortality, which is currently at a higher rate than the regional and national averages, particularly in Leicester City.

The IMSG recognises that many of the factors that increase the risk of infant death will also increase the risk of stillbirth, which is also higher in Leicester City than the regional and national averages. For this reason it has been agreed that this strategy will encompass the issues of both infant mortality and stillbirth.

The measure of stillbirth is currently nationally recognised as the number of babies that die after 24 weeks of gestation. There is some pioneering work being undertaken locally at the University of Leicester (as part of the MBRRACE-UK national audit) that encompasses the collection of data on deaths earlier than this - at 22 and 23 weeks of gestation. This work may influence how stillbirth is measured in future, but for this strategy the current national measure will be used.

Therefore, the agreed scope of the data to be presented and monitored by this strategy is stillbirth (where the baby is delivered from 24+0 weeks of gestation) per 1,000 total births and infant mortality, the number of deaths before the age of 1 per 1,000 live births. Throughout this document the phrase ‘infant mortality’ will be used to encompass both categories of infant death.

Aim and Principles

The overall aim of this strategy is to reduce the incidence of infant mortality and stillbirth in Leicester, Leicestershire and Rutland.

The principles which will guide this work are:

- to make it everybody’s business to support reduction in infant mortality and stillbirth
- to provide strategic leadership and accountability for the delivery against the agreed actions
- to ensure a multi-agency partnership approach across the region is used to deliver the action plan
- to promote the safety and welfare for all children and young people – implementing sound safeguarding practices and procedures and always adhering to the Local Safeguarding Children’s Board Child Protection Procedures
Policy context

The Public Health Outcomes Framework (PHOF) ‘Healthy lives, healthy people: Improving outcomes and supporting transparency’ presents a vision for public health, desired outcomes and the indicators that will help to understand how well public health is being improved and protected. It consists of two high-level overarching outcomes and groups further indicators into four main domains to cover the full public health spectrum. Infant mortality is the first indicator under domain 4: Healthcare public health and preventing premature mortality. The main objective is to reduce the numbers of people living with preventable ill health and people dying prematurely, while reducing the gap between communities.

The Department of Health’s Infant Mortality National Support Team (NST) published a report ‘Tackling health inequalities in infant and maternal health outcomes’ in 2010 which drew together a list of interventions that would support the reduction of infant mortality.

Governance

The governance and oversight of this strategy recognises that reducing the incidence of infant mortality and stillbirth is not the responsibility of a single agency, but is owned by a range of partners that work with children and families living in LLR.

Governance is provided by the Infant Mortality Strategy Group (IMSG) which is led by Public Health, Leicester City Council on behalf of the local authorities across LLR. Scrutiny and challenge is provided by the Maternity Services Liaison Committee and the Health and Wellbeing Board.

An action log has been produced detailing the work that is ongoing and planned to support this strategy. Formal performance management is to be undertaken by the individual agencies named as responsible for leading on the specific actions detailed in the action log. However, the IMSG will meet periodically to receive update reports from lead agencies and review progress against the agreed and emerging actions logged. Priorities and actions will be updated and amended as required and based on upon emerging local themes and new data.

Infant mortality and stillbirth rates in Leicester, Leicestershire and Rutland

Deaths can be counted according to the year in which the death occurred or the year in which the death was registered. The latter is a complete coverage as every death is registered, however there can be a delay of over 12 months in the registration of some infant deaths that have been subject to complex inquiries. Recently nationally published infant mortality rates for the NHS and Public Health Outcomes Framework have changed from using year of registration to year of death.

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Infant Mortality

The graph below shows that Leicester City has significantly higher infant mortality rates than both the national and regional rates. The infant mortality rate for Leicester (2011-13) was 6.4 per 1,000 live births, which is significantly higher than the national average at 4 per 1,000 live births and the East Midlands average at 4.2 per 1,000 live births. In comparison with peer comparators, most of the local authorities are similar to Leicester with the exception of Southampton and Hillingdon that are significantly lower.

The graph below shows that both Leicestershire and Rutland are not significantly different to either national or regional rates. The infant mortality rate for Leicestershire (2011-13) was 3.6 per 1,000 live births and the rate for Rutland was 3.0. In comparison with peer comparators, Leicestershire was similar to all other local authorities with the exception of Bath and North East Somerset (significantly lower), whilst Rutland was similar to all.
The graph below depicts the trend in infant mortality rate in Leicester City over a ten year period. It shows that over the period there has been no significant change in the infant mortality rate, although the rates in England and the East Midlands have significantly decreased over the same time period.

The following two graphs depict the same information for Leicestershire and Rutland. They also show no significant change in the infant mortality rates over the period although the fluctuation appears greater, possibly due to the smaller number of infant deaths in these areas. Please note, the number of infant deaths in Rutland is very small and the data should therefore be treated with caution.
Although the risk of infant mortality is higher in Leicester City, because of the higher number of births (and larger population) the number of deaths occurring in Leicestershire and Rutland are broadly equivalent to the City (87 infant deaths in 2012-14 compared to 84 in the City).

Stillbirth and Neonatal Mortality

The NHS Outcomes Framework also has indicator 1.6(ii), which is the combined rate of stillbirths and neonatal (deaths under 1 month of age) mortality rate. The graph below shows that there was a significant reduction in this rate from 2012 to 2013, with Leicester City’s rate now being comparable to that of England and the East Midlands.

![Mortality in infancy - Rutland](chart)

The following two graphs depict the same information for Leicestershire and Rutland. They both show combined stillbirth and neonatal (deaths under 1 month of age) mortality rates consistently similar to England and the East Midlands since 1999.
Stillbirth

The rate of stillbirth in Leicester was 6.5 deaths per 1,000 total births in 2012-14, which is significantly higher than the national average rate of 4.7 per 1,000 and the regional average of 4.5 per 1,000. The chart below shows that Leicester has the second highest rate of stillbirths when compared with its peer comparators.
The following graph depicts the same information for Leicestershire and Rutland. The rate of stillbirth in Leicestershire was 3.8 per 1,000 births across 2012-14, which is lower than the national average rate of 4.7 per 1,000. The equivalent rate in Rutland was 3.9 per 1,000 births, although the very small numbers mean there is a very broad confidence interval.
What is known about the causes of infant deaths in Leicester, Leicestershire and Rutland?

It has been a statutory requirement since April 2008 for each Local Safeguarding Children’s Board to review the death of every child normally resident in their area. The Leicester, Leicestershire and Rutland (LLR) Child Death Overview Panel (CDOP) is a subgroup of the three LSCBs. The function of CDOP is to review all cases where the baby was born at 23 weeks (and above) gestation. The main purpose of the Panel is to identify factors that might have prevented a child death. ‘Modifiable factors’ (pre-2009/10 known as ‘preventable deaths’) are defined as those which ‘The panel has identified one or more factors..., which may have contributed to the death of the child and which, by means of locally or nationally achievable interventions, could be modified to reduce the risk of future child deaths’ (Working Together to Safeguard Children 2015).

A report has recently been published by the LLR CDOP³ which analyses all the deaths reviewed over a 6 year period. Across LLR there was no significant difference between the proportion of child deaths reviewed with modifiable factors when compared against East Midlands and England across the 6 year period analysed. 22% of all the reviews undertaken over the 6 year period identified modifiable factors.

Due to the fortunately small number of deaths reviewed, detailed analysis and conclusions are limited. Data has been pooled across LLR and over a six-year period in order to reduce random statistical error.

From 2009/10 to 2014/15 the LLR CDOP completed 362 reviews, 204 (56.4%) of which were children resident in Leicester city.

The figure below shows that a third of child deaths in LLR were infants under 28 days (33%) and a further 12% for infants aged 1-12 months. In LLR there are significantly fewer child deaths under 28 days compared with the England rate of 42%. 45% of all child deaths across LLR occurred within the first year of life compared with 53% of deaths in England.

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During 2011-13, there were 15 child deaths (25.5 per 100,000) in Leicester reported for children aged 1-4 years, of which the main causes of death were:

- respiratory diseases
- external causes
- congenital anomalies
- infectious diseases
- metabolic disorders

Due to the ethnic make-up of Leicester city in particular, the issue of consanguinity has been identified by the LLR CDOP as a factor in a number of deaths. Work is planned to explore whether consanguinity may be considered locally as a potentially modifiable factor.

It is a consistent feature both locally and nationally that children under the age of 1 account for the majority of child deaths. These deaths have common features which include low birth weight, prematurity, maternal smoking and the associated issues of hypertension, diabetes and obesity and their links to poverty and infant nutrition.

### Infant mortality and deprivation

Infant mortality is more likely to occur in households living in poverty and national research has shown that there are higher rates in families from some ethnic minority groups such as Pakistani, Bangladeshi and Black Caribbean groups. Leicester City currently has the ninth highest level of child poverty in the country with 37% of children living in poverty, an increase on previous years. However, the graph below shows that there is no significant difference in the rates of infant mortality in Leicester by deprivation quintiles. It has to be noted that confidence intervals are large due to the small numbers.
Leicestershire has relatively low levels of children living in poverty, significantly less than both national and regional comparisons. 11.2% of children under 16 in Leicestershire live in poverty compared with 18.6% in England and 17.8% in the East Midlands. Nonetheless, in 2013 this represented 12,765 children (compared to 18,695 in Leicester and 435 in Rutland). The graph below shows that there is no significant difference in the rates of infant mortality in Leicestershire by deprivation quintiles. It has to be noted that confidence intervals are large due to the small numbers.

Levels of child poverty in Rutland are lower still with 7.3% of children under 16 living in poverty. The graph below shows that there is no significant difference in the rates of infant mortality in Rutland by deprivation quintiles. It has to be noted that confidence intervals are large due to the small numbers and as Rutland is relatively affluent nationally there are no infant deaths recorded in areas defined as most or more deprived.
There are **differences between areas** in the rate of infant mortality across the city with 3 wards (Beaumont Leys, Charnwood and Stoneygate) showing significantly higher rates than the national average. The map below shows the infant mortality rate in Leicester City 2008 to 2012 by ward level against deprivation. The data demonstrates that it is not inevitable in Leicester that the most deprived areas have the highest infant mortality rates.

Between 2009 and 2013, infant mortality rates were low for all wards in Rutland and the majority of wards in Leicestershire and therefore data is not presented in this strategy. Of those wards in Leicestershire where data was not suppressed, only one had an infant mortality rate significantly higher than the England average – this was the ward of Shepshed East.
**Infant mortality risk factors**

There are several risk factors which can contribute towards infants’ death and they are divided into the following categories as follows:

1 – Factors related to the mother:
   a. **Maternal age**: high rates of infant mortality are among women aged 40 and over and women under the age of 20. Reducing under-18 conceptions would decrease the infant mortality gap by 1%.
   b. **Smoking**: it is well documented that smoking in pregnancy has serious consequences including stillbirth and low birth weight. Reducing the smoking in pregnancy rates would decrease the gap by 2%. It is important to note that passive smoking also contributes to infant deaths.
   c. **Maternal obesity**: is associated with increased risk of congenital anomalies and increased rate of infant deaths. Reducing the prevalence of obesity would decrease the infant mortality gap by 2.8%.
   d. **Maternal education**: there is clear association between mother’s education and infant mortality. Improving maternal educational attainment reduces the risk of infant mortality.
   e. **Domestic violence**: it is estimated that 30% of domestic violence cases start or escalate during pregnancy and domestic violence is associated with increases in rates of miscarriage, low birth weight, premature birth, foetal injury and foetal death.
   f. **Maternal ethnicity**: Mothers from the Asian or Asian British ethnic groups are reported to have significantly higher proportions of low birth weight births and infant deaths.

2 – Factors related to the infant:
   a. **Low birth weight**: the main risk factors associated with low birth weight include: maternal age, multiple birth, smoking (including passive) in pregnancy, language barriers and delay in accessing the antenatal care pathway, maternal infection, and poor maternal nutrition.
   b. **Breastfeeding**: increasing the rate of breastfeeding initiation in the Routine and Manual (R&M) group would reduce the infant mortality gap by 4%.
   c. **Infections**: childhood immunisations reduce the risk of infections in infancy. Leicester has a good uptake of childhood immunisation of more than the recommended 95% coverage.
   d. **Congenital anomalies**: serious birth defects are not always preventable. However, there are some measures that can increase the chances of having a healthy baby, such as folic acid intake and avoiding smoking during pregnancy.

3 – Wider determinants related to infant mortality:
   a. **Poverty and deprivation**: reducing child poverty would reduce the infant mortality gap by 3%.
   b. **Housing and overcrowding**: improving housing conditions and reducing overcrowding would reduce the infant mortality gap by 1.4%.
   c. **Targeted interventions to prevent SIDS**: would decrease the gap by 1.4%.

4 – Factors related to preconception care, pregnancy and delivery:
   a. Early booking for antenatal care
   b. Screening for infections and congenital anomalies
   c. Maternal immunisation, such as MMR, whooping cough and flu vaccination
   d. Medical conditions during pregnancy, such as diabetes and hypertension
   e. Nutritional status, such as folic acid supplements
   f. Difficult and complex labour, such as use of instruments
Stillbirths – Causes and risk factors

27.8% of stillbirths are classified as unexplained\(^4\). 92% of stillbirths occur in the antepartum period (not long before birth), where the foetus shows no sign of life prior to labour. ONS data ranks the medical causes of stillbirths as follows:
- unexplained (54%)
- asphyxia, anoxia or trauma (25%)
- congenital abnormalities and chromosomal disorders (15%)
- infections (<10%)

Risk factors have been cited by the Department of Health\(^5\) as follows:
- smoking in pregnancy – doubles the risk of stillbirth
- maternal obesity – women with a pregnancy BMI >35 increase the risk of stillbirth
- low socioeconomic status of mother
- ethnicity – mothers of Black ethnic origin are more than twice as likely and mothers of Asian ethnic origin are 1.5 times more likely to have a stillbirth
- older and younger mothers – mothers under 20 are 1.4 times more likely and mothers over 40 are 1.7 times more likely to have a stillbirth
- other factors e.g. multiple births, diabetes, influenza in pregnancy

Evidence base

Reducing health inequalities and infant mortality requires a combination of health interventions and actions on the wider social determinants of health by the NHS, local authorities and voluntary organisations, charities and social enterprises. These interventions must start before birth. Giving every child the best start in life through interventions to reduce health inequalities in infancy is central to reducing health inequalities across the life course.

The key national reports making recommendations on how to improve the health outcomes for the mother and unborn child and reduce infant mortality are:
- Tackling health inequalities in infant and maternal health outcomes: report of the infant mortality national support team in December 2010\(^6\)
- NICE antenatal clinical guideline 62\(^7\)
- NICE pregnancy and complex social factors clinical guideline 110\(^8\)
- NICE postnatal guidelines were updated in February 2015 to include advice on co-sleeping\(^9\)
- Maternity matters, Department of Health 2007\(^10\)
- Department of Health Implementation Plan for Reducing Health Inequalities in Infant Mortality 2007\(^11\)

A number of terms are used in the literature and can sometimes be muddled. When a baby dies suddenly and unexpectedly this is referred to as Sudden Unexpected Death in Infancy (SUDI). Around half of the 600 sudden infant deaths in the UK each year can be explained by a post-mortem

\(^6\) \(\text{http://tinyurl.com/pfd4t5t}\) (accessed 24 November 2014)
\(^7\) \(\text{http://guidance.nice.org.uk/CG62/NICEGuidance/pdf/English}\)
\(^8\) \(\text{http://guidance.nice.org.uk/CG110/NICEGuidance/pdf/English}\)
\(^9\) \(\text{http://www.nice.org.uk/guidance/cg37/resources/guidance-postnatal-care-pdf}\)
\(^10\) \(\text{http://tinyurl.com/p5mnhz}\)
\(^11\) \(\text{http://www.sepho.org.uk/Download/Public/11120/1/DH_081336.pdf}\)
examination. Deaths that remain unexplained after that are usually registered as Sudden Infant Death Syndrome (SIDS), for which there is no known cause. The acronym SUDI is problematic for unexplained deaths as it is commonly used for ‘unexpected’ deaths some of which will be explained. SIDS has been commonly known as ‘cot death’. However, this is no longer the accepted term as it suggests SIDS only occurs when a baby is in their cot, which is known to be untrue.

The terms referred to in this strategy are therefore defined as per The Lullaby Trust’s definition guidelines as follows:

**SUDI** - Sudden Unexpected Death in Infancy - the sudden and unexpected death of an infant that is initially unexplained

**SIDS** - Sudden Infant Death Syndrome - the sudden and unexpected death of a baby where no cause is found following post mortem examination (therefore remains ‘unexplained’)

A summary of relevant NICE guidelines is appended to this report. The diagram below shows the key causes of infant mortality, what actions can be taken, and what impact each can be expected to have on infant mortality overall.

<table>
<thead>
<tr>
<th>What would work</th>
<th>Impact on the 2002-04 gap (percentage points)</th>
<th>What would work</th>
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<tbody>
<tr>
<td>Reducing conceptions in under 18s in the R&amp;M group by 44% to meet the target</td>
<td>1.5</td>
<td>Reducing overcrowding in the R&amp;M group, through its effect on SUDI</td>
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<tr>
<td>Targeted interventions to prevent SUDI by 10% in the R&amp;M group</td>
<td>1.4</td>
<td>Reducing the rate of smoking in pregnancy by two percentage points by 2010</td>
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<tr>
<td>Reducing the prevalence of obesity in the R&amp;M group to 23%</td>
<td>2.0</td>
<td>Meeting the child poverty strategy</td>
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<tr>
<td>Increasing the rate of breastfeeding initiation in the R&amp;M group to those of the non-R&amp;M group from 67% to 83%</td>
<td>3.0</td>
<td>Long-term actions</td>
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<td>Immediate actions</td>
<td></td>
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<tr>
<td>Optimising preconception care</td>
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<td>Improving maternal educational attainment</td>
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<td>Early booking</td>
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<td>Access to culturally sensitive healthcare</td>
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<tr>
<td>Reducing maternal and infant infections</td>
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</tbody>
</table>

Source: Department of Health
R&M = ‘Routine & Manual’ occupational group

The Department of Health published an Implementation Plan for Reducing Health Inequalities in Infant Mortality at the end of 2007. This offered further guidance for local areas in terms of what works and what would make a difference. The implementation plan highlighted interventions that will have a demonstrable impact on the gap, those that are likely to have an impact and those that are likely to reduce Infant Mortality overall. These interventions are categorised into three groups:

1. Interventions that have a **demonstrable impact** on the infant mortality gap – reducing **maternity obesity**, **breastfeeding**, **smoking**, **teenage pregnancy**, **household overcrowding**, and meeting the **child poverty** target.

2. Interventions that are **likely to impact** on the infant mortality gap, such as ensuring that all pregnant women have a health and social care needs assessment by 13 weeks gestation; and
3. Interventions that are likely to reduce infant mortality overall, including neonatal screening, prevention of maternal and infant infections and ensuring appropriate health service configuration through networks of care for maternity and neonatal services.

Dominant risk factors in infant deaths are poverty, smoking in pregnancy and absence of breastfeeding.

NHS England published a report in March 2016 (‘Saving Babies’ Lives’\(^\text{12}\)) recommending a ‘care bundle’ of interventions that have been proven to reduce the incidence of stillbirth, and early neonatal death. It brings together four elements of care that are recognised as evidence-based and/or best practice. The care bundle approach is a recognised way to bring about improvement when implemented as a package, as greater benefits are achieved at a faster pace than if the interventions had been implemented individually. The four elements identified are:

1. Reducing smoking in pregnancy
2. Risk assessment and surveillance for foetal growth restriction
3. Raising awareness of reduced foetal movement
4. Effective foetal monitoring during labour

Local context

The IMSG have identified a number of current strategies, action plans and policies across LLR that already support the activities that have been shown to reduce the risk of infant mortality. These include those relating specifically to Health and Wellbeing, Early Help, Infant Feeding, Healthy Weight, Smoking, Child Poverty and Early Years.

Leicester City’s ‘Director of Public Health Annual Report 2013/14’ provides the latest available data and trends in relation to risk factors associated with infant mortality\(^\text{13}\). Below are some of the headline indicators:

- Breastfeeding rates in Leicester are significantly higher with levels consistently above national averages, particularly at 6-8 weeks.
- The smoking in pregnancy rate is similar to both the national rate and our peer comparator local authorities. However, large variations exist across the city.
- The teenage conception rate in Leicester has significantly reduced from a baseline in 1998 of 64.6 per 1,000 to in 29.7 in 2013.
- In 2010/11, 25% of pregnant women in Leicester were recorded as overweight and 19% as obese (higher than the national rate of 15.6%).
- In Leicester, the proportion of women booking before 12 weeks is significantly lower than the national average (Quarter2, 2014/15).

Headline indicators for similar risk factors in Leicestershire and Rutland are as follows:

- Breastfeeding rates in both Leicestershire and Rutland are significantly higher than national levels at 6-8 weeks. Breastfeeding initiation in Leicestershire is similar to national levels, whilst Rutland is higher.
- The smoking in pregnancy rate in Leicestershire is better than the national rate. Rutland does not have an equivalent figure.
- The teenage conception rate in Leicestershire has significantly reduced from a baseline in 1998 of 38 per 1,000 to 20.9 in 2013. Rutland has not reduced significantly but is consistently significantly lower than national level.

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The National Support Team report produced for Leicester following the visit in 2010 contained a list of 5 main strategic key messages:

1. **Vision and Strategy:** Accelerate progress on reducing infant mortality through current action plans for sustainable improvement embedding a culture whereby it is recognised that reducing infant mortality is ‘everybody’s’ business.

2. **Data and Needs Assessment:** We recommend that NHS Leicester City and partners further develop the dashboard of relevant indicators for maternal and child health.

3. **Sudden Infant Death Syndrome:** Consider how a range of non-NHS colleagues can help spread the message about the risks of bed sharing and consider developing a concerted campaign around preventing SIDS.

4. **Screening:** Develop a strategic delivery model for screening that ensures services are commissioned, contracted, performance managed and governed for health outcomes. Ensure that sonographers are recruited, trained and supported to implement the first trimester combined screening for Down’s screening.

5. **Reducing Tobacco Use:** Ensure that there is Executive/Cabinet-level ownership of reducing smoking in pregnancy and a clear line of communication and accountability to the Local Strategic Partnership. Contract mandatory delivery of brief intervention training and referral of smokers into NHS Stop Smoking Services is as part of all relevant commissioned services.

**Actions undertaken to date**

A series of Infant Mortality Roadshows were delivered across the city and county aiming to embed a culture where it is recognised that reducing infant mortality is ‘everybody’s business’. The roadshows involved a wide range of stakeholders including midwives, health visitors, commissioners, children’s centre staff, providers of services such as smoking cessation and voluntary sector organisations. The first city-wide event was held in October 2012 to launch “Health in Infancy” champions, a “Healthy Infant” brochure for front-line staff and to develop a sustainable approach to tackling infant mortality in the city. A follow-up event took place in December 2013 to review progress, share good practice and consider next steps.

A range of services/initiatives are in place offering support to reduce risk, promote protective behaviours and to tackle issues such as poverty and poor housing. The list of services is long and wide ranging but specific examples include:

- A maternal obesity service for women was launched in 2013. Women are offered a place on a 6 week programme involving advice and motivational support from both a midwife and dietician along with physical activity sessions.

- University Hospitals Leicester (UHL) achieved the UNICEF Baby Friendly Initiative stage 2 accreditation in November 2013 and is currently working for Stage 3 accreditation. This has required a commitment to a range of actions including investment in considerable staff training in breastfeeding.

- Leicestershire Partnership Trust (LPT) achieved UNICEF Baby Friendly Initiative Stage 3 accreditation in 2015. This has required a commitment to a range of actions including investment in considerable staff training in breastfeeding.

- A breastfeeding peer support programme targeted at areas of the city with the lowest breastfeeding rates and an equivalent programme across Leicestershire and Rutland.

- Smoking in Pregnancy leads have been identified within maternity services and the smoking cessation team. All midwives attend mandatory training sessions about Smoking in Pregnancy and support the “Step Right Out” campaign (encouraging people to keep their homes and cars completely smoke-free).
A multi-agency partnership approach has been taken across health, education, youth services and young people across LLR to reduce teenage pregnancy. This approach has been successful in reducing teenage pregnancy by:

- Improving access and information about contraception and sexual health
- Targeted educational programmes for vulnerable young people most at risk
- Using a range of innovative schemes to raise young people’s awareness of sexual health matters and to make sure they know where to get help and advice
- Family Nurse Partnership which works with first-time teenage mothers to prevent further pregnancies and to get young mums back into education and work
- Improving the educational attainment of young people in some of the city’s most disadvantaged areas
- Launching a new toolkit for the delivery of Relationships & Sex Education (RSE) in schools

Other actions have included:

- There has been concerted effort to increase the uptake of childhood immunisations. Leicester now has more than 95% uptake rate of all vaccinations before the age of one, protecting against serious diseases such meningitis and whooping cough.
- The establishment of a perinatal mortality group led by UHL. An action plan has been developed tackling issues such as ensuring that all perinatal deaths are fully reviewed in a timely manner and informing clinical service developments.
- All Leicester City Children, Young People and Family Centres support and deliver brief interventions as part of the “Step Right Out” campaign. In the last year, this action alone has generated 1,100 pledges and 253 referrals to the Stop Smoking Service.
- Leicester Partnership Trust has recently developed a Policy on Safe Sleeping for infants.
- Health Visitor interventions around infant mortality include but are not limited to the following:
  - Ante-natal contact using promotional guides – 1-1 visit at home, also groups
  - Preparing for Parenthood and Beyond – delivered in conjunction with Children Centre workers
  - New Birth Assessment visit between 10 – 14 days – at home – includes discussion on smoke free, safe sleeping (use Lullaby trust leaflet), feeding advice
  - Parents as Partners (PAP) – a pilot scheme engaging with parents through an outreach model
  - 6 – 8 week assessment – (medical by GP) includes same elements as above
  - Vulnerable families are offered further support and referred into early help services across LLR

Considerable progress has taken place to address the recommendations made by the NST but a full audit against all the recommendations needs to be undertaken.
Appendix A – NICE Guidance

NICE Guidance (2010)\(^\text{14}\) highlights complex social factors that may adversely impact on pregnancy outcomes and increase the risk of infant/maternal death:

- Women who misuse substances (alcohol and/or drugs).
- Women who are recent migrants, asylum seekers or refugees, or who have difficulty reading or speaking English.
- Young women under the age of 20.
- Women who experience domestic abuse.

Key messages from relevant NICE are presented below in terms of pre-conceptual care, antenatal care, intra-partum care and post-natal care.

**Pre-conceptual Care**

NICE recommends that prospective parents are advised about the following major points prior to pregnancy:

- A healthy lifestyle – e.g. smoking, alcohol and substance misuse.
- Weight management – e.g. achieve healthy weight prior to pregnancy.
- Folic Acid - to reduce the risk of neural tube defects.
- Rubella immunity - to reduce the risk of rubella infection.
- Sexual health – e.g. hepatitis B & HIV.
- Pre-existing familial conditions - genetic counselling, screening and support if needed.
- Pre-existing clinical conditions – e.g. diabetes, epilepsy, high blood pressure, and mental health conditions.
- Previous poor obstetric history – to arrange early access to maternity care to improve outcomes.
- Social care support – to identify and support women with complex social factors, including vulnerable parents, children in need and those at heightened risk of domestic violence.
- Access to maternity care - how to access care and the importance of presenting early in pregnancy, regardless of previous clinical history or social circumstances.

**Antenatal Care**

Antenatal health care has a unique and vital contribution to make to improving maternal and infant health outcomes and reducing health inequalities, ensuring that every child has the best start in life and is ready to succeed.

The Health Scotland report into antenatal health inequalities (2011)\(^\text{15}\), argues that health inequalities can be addressed by taking action in three key areas:

1. Improving access to antenatal healthcare services
2. Improving the assessment of health and social need
3. Ensuring equity in the quality of care for women and their babies.

NICE Guidance currently highlights the need for antenatal education classes to improve:

- Breastfeeding rates
- Healthy behaviours
- Contact with services
- Support for anxiety and depression
- Satisfaction with birth

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\(^{14}\) NICE CG 110 Pregnancy and complex social factors: A model for service provision for pregnant women with complex social factors (2010)

\(^{15}\) Health Scotland: Antenatal health inequalities: a rapid review of the evidence, 2011
NICE guidance also provides recommendations relating to the following areas:

**Antenatal care**
This should be provided in the community, as close as possible to the family home. Pregnant women with health, emotional or social needs should be referred to specialist care.

**Medical conditions**
Pregnant women with specific medical conditions such as diabetes, hypertension, epilepsy, renal/cardiac and mental health needs to be identified and offered specific support tailored to their needs.

**Weight management**
The guidance recommends physical or recreational activities for at least 30 minutes per day and encourages community based services to offer women with babies the opportunity to participate in a range of physical activities. The evidence does not recommend weight-loss during pregnancy as this may harm the health of the unborn child.

**Maternal and child nutrition**
Guidance provided for vitamin D and folic acid supplements.

**Mental disorders**
Guidance to help Clinicians balance the risks of treating disorders, including anxiety disorders, depression, bipolar disorder, schizophrenia and postnatal psychotic disorders, with not treating it.

**Smoking in pregnancy**
The Guidance recommends smokers are identified as early as possible by midwives and referred to specialist stop smoking services.

**Intra-partum care**
The Birthplace in England Research Programme\(^{16}\) provides recent evidence which supports the policy of offering low risk women a choice of birth setting.

- Planned births in midwifery units have the same outcomes for babies compared with obstetric units, with fewer interventions and around half the rate of caesarean sections for low-risk women.
- For women having a first baby, a planned home birth increases the risk for the baby and there is a fairly high probability of transfer to hospital during or immediately after labour - a third to almost a half of first-time mothers transfer from home and midwifery units to obstetric units.
- For women having a subsequent baby, a planned home birth does not increase risk for the baby, and reduces the risk of interventions for the mother.
- A third to almost a half of first-time mothers transfer from home and midwifery units to obstetric units.
- For women having a second or subsequent baby, the transfer rate reduces to around 10%
- The shortage of midwifery staff is a key challenge – given higher staff ratios in settings outside obstetric units, any expansion of home and midwifery units (although potentially cost-saving) is likely to require more midwives.

**Postnatal care**
NICE Guidance sets out the routine postnatal care that every women and baby should receive in the first 6-8 weeks of birth. It focuses on good communication between hospital, GP, community midwife, health visitors and other support workers to provide care based on the best available evidence. There is significant potential to improve the health and well-being of both mother and baby during the postnatal period, particularly around future pregnancy, stopping smoking, sexual health, emotional health, healthy diet, physical activity, weight management.

**Maternal and child nutrition**

- Promote, advise, support and manage breastfeeding on an individual and group basis.

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\(^{16}\) Birthplace in England Research Programme, cited in NHS Confederation SDO Network research digest June 2012 Issue 3
• Ensure both types of Healthy Start vitamin supplement (for women and for children aged from 6 months to 4 years) are available for distribution by health professionals.
• There is insufficient evidence to suggest that infant formula based on partially or extensively hydrolysed cow’s milk protein can help prevent allergies.

Weight management (only for mothers).
• The guidance presents the most effective weight-loss programmes and how to support obese women after they become pregnant. Obese women should be offered structured weight loss programmes using evidence-based behaviour change techniques to motivate women.
• Encourage breast feeding and healthy diet. Regular exercise can be started immediately after giving birth for uncomplicated pregnancy while it is recommended to consult medical care in case of complications before resuming pre-pregnancy activity levels.

SIDS
see page 34 -35