7. INFANT MORTALITY

INTRODUCTION

Infant mortality refers to the death of a baby before his or her first birthday, excluding still births. Although infant mortality has had a sustained downward trend throughout the post-war period, significant health inequalities in infant mortality between social classes and community groups have been persistent for generations.

The Black Report analysed death registrations by social class in the early 1970s and found that baby boys born into unskilled manual working families were three times more likely to die in infancy than those born into professional households. For baby girls the difference in mortality rates between these groups was even higher (1). The report suggested that these inequalities had been widening rather than diminishing since the NHS had been set up in 1948. It concluded that these inequalities were mainly attributable to other social inequalities influencing health, including income, education, housing, employment, and conditions of work.

Reducing the gap in infant mortality by at least 10% between routine and manual groups and the population as a whole by 2010 (compared with 1997-99) is one of the key national health inequalities targets (2). Infant mortality rates have fallen nationally in all social class groups since 1997-99 but have been falling faster in the general population than in routine and manual groups. This indicates that the relative inequalities gap has widened (3).

WHAT ARE THE KEY ISSUES?

An in-depth study of infant mortality in London found that there were a number of population risk factors associated with higher rates of infant mortality across London (3). These included the proportions of:

- Low birth weight babies.
- Sole parent registration of births.
- Mothers living in super output areas (SOAs) of greatest deprivation.
• Mothers born in countries with high infant mortality, particularly East and West African and Afro-Caribbean countries.

• Teenage pregnancies.

• Babies born to couples in routine and manual occupational groups.

• Exposure to secondhand smoke in the home.

• Low immunisation coverage.

The analysis found that Islington was in the top quartile of London councils for the following risk factors:

• The proportion of births sole registered by the mother. Islington had the seventh highest proportion of single registrations in the capital in 2001-03. 10.7% of births were sole registered by the mother.

• Deprivation, as measured by the proportion of births to women living in the most deprived super output areas (SOAs). In 2001-03 62.1% of births in Islington were in SOAs with an Index of Multiple Deprivation score of 40 or more, the third highest proportion in London, exceeded only by City & Hackney and Tower Hamlets.

• The proportion of babies born with low birth weights. Although the proportion was similar to the average for England, Islington was within the top quartile of boroughs in London (4).

THE ISLINGTON PICTURE

The infant mortality rate in Islington rose from 6.7 per 1,000 live births in 1999-2001 to 6.9 per 1,000 in 2003-05, before falling to 4.6 per 1,000 in 2006-08 (Figure 7.1). The number of infant deaths decreased in that time from 52 over the three years 1999-2001 to 39 during 2006-08. The Islington infant mortality rate in 2006-08 was similar to the London and national rates: England was 4.8 per 1,000 and London was 4.6 per 1,000 live births.
Figure 7.1: Infant mortality rate per 1000 live births for Islington, London and England, three year averages, 1999-2001 to 2006-08.

Source: Office for National Statistics, 2009

Projections around infant mortality are related to the predicted number of births in the borough. There are currently around 2,800 births a year in Islington. Births are projected to increase to an average of 2,950 a year by 2020 (4). The ethnic diversity of mothers and babies is expected to increase, reflecting wider changes within the population (5).

Figure 7.2: Actual and projected number of births, Islington, 2008-9 to 2019-20

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The Total Period Fertility Rate (the average number of children a woman is expected to have over her lifetime given the current pattern of births) was 1.49 in Islington in 2008, significantly lower than the London average of 1.95 and national average of 1.97.

**Figure 7.3: Total period fertility rates, Islington, London and England, 2008**

Source: NCHOD (ONS), 2008

The London Health Observatory set out a number of indicators to monitor local progress on reducing the inequalities gap in infant mortality. These include:

- Early booking with maternity services, for timely assessment of health and social needs in pregnancy, including screening.

- Smoking prevalence reported in pregnancy and stop smoking service quit rates in pregnancy.

- Initiation and continuation of breastfeeding.

- Other relevant local outcome measures include:
  - Percentage of low birth weight babies
  - Teenage conception rates, including the percentage proceeding with pregnancy
Immunisation rates

The last two outcome measures are covered in Chapter 5 on teenage pregnancy and Chapter 16 on childhood immunisations. The action taken on other outcome measures are covered in the section below.

SERVICES CURRENTLY PROVIDED IN ISLINGTON

The two major maternity units serving Islington are The Whittington Hospital and University College London Hospital (UCLH). Together, the two units see over 90% of Islington women for their maternity care and are responsible for providing community-based maternity care across the borough. This includes:

- Encouraging early booking.
- Education and support through pregnancy and the postnatal period.
- Identification and management of risks including screening,
- Action to reduce the risk of low birth weight
- Advice and support to reduce the risk of infant mortality and other serious adverse outcomes.

Low birth weight - Low birth weight can be addressed through maternal nutrition before pregnancy, in pregnancy and while breastfeeding, not smoking during pregnancy, and following expert guidance on the consumption of alcohol in pregnancy. Primary care, maternity, and health visiting provide advice and support, and further breastfeeding advice and support is offered through BFN (the Breastfeeding Network) and other lactation specialists.

Smoking - In Islington during 2008/9, 8.5% of mothers reported that they smoked during their pregnancy (6). This marked a significant downward trend in recent years, sustained since 2004/5 when 15.1% of women reported smoking in pregnancy. Midwives in Islington have been trained in Level 1 stop smoking advice and can refer to a specialist post based at the Whittington or to an adviser in the community. Data from local health visiting services records that 30% of babies under one are exposed to environmental tobacco smoke in the home. A councilwide ‘Smokefree Homes’ initiative between NHS Islington, London Fire Brigade and Homes For Islington is underway.
**Preterm births** - Preterm births (babies born less than 37 weeks gestation) have a significantly higher risk of infant mortality. Risk reduction strategies include eliminating environmental factors (for example smoking) and stressors, treating underlying medical disorders, optimising pre-conceptual and prenatal maternal physical and mental health, and reducing teenage pregnancies and providing targeted support for teenage parents.

**Screening** - Antenatal and newborn screening allow for the detection of some congenital anomalies which are a cause of infant mortality. Early booking by 10-12 weeks gestation allows for antenatal screening and diagnosis and planned management. A Newborn Blood Spot Screening Audit carried out in Islington in May 2009 showed that Islington met national standards for coverage, with 100% of babies born and resident in the borough offered the screening. But standards for timeliness of samples were not met (91% of samples taken between 5 and 7 days against a target of 95%) and a significant proportion of results were received later than the standard of 17 days, principally related to delays in reports being received from the laboratory (6).

**Sudden Unexpected Death in Infancy (SUDI)** - SUDI is an important cause of infant mortality, risk is highest in the first three to eight months of life. The risk is higher for males, babies born preterm, low birth weight babies and those sleeping on their front or side. SUDI occurs more commonly in disadvantaged populations. Maternity and health visiting services are trained in SUDI prevention, and all parents receive advice and support on how to reduce the risk of SUDI, for example on sleeping position and avoiding exposure to secondhand smoke.

**Early booking** - Late booking and insufficient antenatal care increases the risk of poor outcomes for infants, particularly when the mother is very young, socially deprived, or from a BME group (7) (8).

**Healthy lifestyle promotion** - Action in the community to promote healthier lifestyles, particularly with children and young people and younger adults, may help to prevent or reduce trends in obesity, smoking, alcohol and drug use among younger adult women that may affect future maternity outcomes. These include actions through the Healthy Schools Programme, promotion of greater levels of physical activity and healthy eating through Children’s Centres and schools, and
Smokefree Islington activities to prevent children and young people from starting smoking including action on underage sales.

Safeguarding - Prevention and early detection of child maltreatment and ensuring rapid and appropriate help for families where domestic violence is an issue can contribute to a reduction in infant mortality rates. Islington’s Safeguarding Board oversees all safeguarding activity in the borough, which includes the training and supervision procedures and staffing to ensure services focus on the wellbeing and safety of children and young people.

NATIONAL DRIVERS FOR SERVICE PROVISION

NICE guidelines and the Department of Health’s ‘Maternity Matters and Saving Mothers’ Lives’ (the report of the Confidential Enquiry into Maternal and Child Health) identify the need to ensure that pregnant women access the appropriate antenatal care from early on in their pregnancy.

The most recent comprehensive benchmarking of services in England against maternity standards was carried out in 2007 by the Healthcare Commission. At that time, the survey found that women attending local hospitals were less likely to be booked by 12 weeks gestation than women in England - 28% at The Whittington and 32% at UCLH - compared with 67% for England. Local women were less likely to directly book with a midwife - 7% at The Whittington and 10% at UCLH - compared with 19% nationally. The Whittington and UCLH had some of the longest average times from first contact to booking an appointment in the 2007 survey (4.3 weeks and 3.9 weeks respectively). The best performing trusts’ average was about 1.5 weeks.

The Health Care Commission survey also found a higher proportion of women at local hospitals had fewer antenatal checks than recommended in NICE guidelines - 27.2% at The Whittington and 32.3% at UCLH - both in the least well performing quartile of trusts nationally in 2007. Fifty-two per cent of women in The Whittington and 55% at UCLH in 2007 stated that they attended NHS antenatal classes, compared to the national average of 61%.

Subsequently, both trusts have implemented improvement plans to address this. For example, The Whittington set up a project to increase women’s awareness of the importance of early booking and encourage more self-referral directly to maternity
services as well as through their GP. (9) It also aims to provide outreach to women from disadvantaged groups (refugee communities, teenagers and other groups) who may not be aware of the health benefits of early maternity care, while ensuring that pregnant women without a GP are registered as soon as possible.

Following action to improve booking, the percentage of women seeing a maternity healthcare professional by 12 weeks of pregnancy has shown significant increases at both local units. In the first two quarters of 2009/10, 74.6% of Islington women at UCLH and 53.6% of Islington women at The Whittington were seen by 12 weeks. However, these figures were compiled on different bases and therefore could not be directly compared with the survey figures above or with each other.

PROGRESS SINCE THE 2008 JSNA

Early booking and engagement with services is being encouraged through:

- More convenient access through Children’s Centres and health centres.

- Better support for teenage parents, with a dedicated maternity team at The Whittington and Islington the Family Nurse Partnership programme pilot, providing tailored support and advice from antenatal care through to second birthday.

- During the first two quarters of 2009/10, 63.5% of Islington women seen by the two major local maternity services were seen within 12 weeks.

Breastfeeding services have been enhanced with a further 53 Islington mothers completing training as peer supporters since 2008. Sixteen mothers have completed the higher level training to become peer supporters, enabling them to work more autonomously and take telephone support calls. Three enhanced peer support workers offer home and postnatal ward visits within the first few days after delivery to all mothers.

In the first six months of the enhanced peer support programme, contacts were made with 1,300 Islington women at The Whittington and in the community targeting the three wards with lowest breastfeeding rates: Finsbury Park, Holloway and Junction. Over the last year a range of training initiatives for health and Children’s
Centre staff have been implemented including the three-day UNICEF Breastfeeding Management course (124 attendees), breastfeeding awareness workshops for new staff, and awareness training for Children’s Centre staff.

**OPPORTUNITIES FOR DEVELOPMENT**

Islington is working towards Baby Friendly status across health services and Children’s Centres for breastfeeding. An action planning and implementation visit from UNICEF UK Baby Friendly officials was made in May 2009 informing preparations for achieving status. This presents an important future development for the borough.

Although available information points to a good, and increasing, level of breastfeeding continuation, routine data on breastfeeding at six to eight weeks, and on developmental checks in early life, is significantly under-reported. This indicates the need to tighten up and improve the information and financial flows linked to reporting from primary care and health visiting.

Continuing attention to promoting timely booking with maternity services is necessary to support improvements in health and social outcomes and meet quality standards for maternity services. This will require a mix of actions within services and in the community to support earlier booking for women. Other opportunities for development - in teenage pregnancy, immunisation, smoking, physical activity and healthy eating - have been detailed in the respective sections.

**RECOMMENDATIONS TO REDUCE INFANT MORTALITY IN ISLINGTON**

- Continue to promote earlier booking and offer greater choice to women in maternity services, in line with the Maternity Matters standards.

- Support healthy lifestyles and reduce smoking in the home before, during and after pregnancy.

- Improve recording of breastfeeding status at six to eight weeks, to ensure coverage rates are accurately recorded and to enable better targeting of help and support.
• Reduce longer term trends among overweight and obesity in girls and younger adult women through preventative actions, and ensure there are effective care pathways in maternity services for pregnant women who are obese.

• Improve awareness of the benefits of, and access to, pre-conceptual care and help.

• Ensure high quality SRE (Sex and Relationships Education) in all settings for young people.

• Improve the coverage and timeliness of immunisations in the population.

• Ensure that screening standards for the newborn screening programme are met, and supported through local audit.

• Reduce teenage conception rates, and improve support and care for teenage parents and their babies.

• Ensure effective operation of perinatal mental health pathways to ensure women with mental health problems are identified and receive coordinated support and care.

REFERENCE LIST

(9) Whittington Hospital. Midwives as “First Point of Contact” project.