JOINT STRATEGIC NEEDS ASSESSMENT 2015/16

CHILDREN AND YOUNG PEOPLE
(STARTING WELL AND DEVELOPING WELL)

CHAPTER: Infancy and Early Years

TOPIC: Infant mortality

Why is this important?

Infant mortality is a sensitive measure of the overall health of a population. It reflects the apparent association between the causes of infant mortality and other factors that are likely to influence the health status of whole populations, such as their economic development, general living conditions, social well being, rates of illness and the quality of the environment.

The **infant mortality rate (IMR)** is defined as the number of deaths under the age of one year, per 1,000 live births. It consists of two components:

- The **neonatal mortality rate**: the number of neonatal deaths (those occurring during the first 28 days of life) per 1,000 live births
- The **post-neonatal mortality rate**: the number of infants who die between 28 days and less than one year, per 1,000 live births.

The **perinatal mortality rate (PMR),** the number of still births and deaths within the first seven days of life per 1,000 live and still births. This is a key outcome for new-born care and directly reflects prenatal, intrapartum, and new-born care.

Mortality during the neonatal period is considered a good indicator of both maternal and new-born health and care. (Department of Health (2007) *Review of the health inequalities infant mortality PSA target)*

The causes of perinatal and infant mortality
The majority of deaths in the perinatal period and infancy are due to perinatal problems such as immaturity related conditions and congenital abnormalities. Immaturity due to preterm (<37 weeks gestation) birth remain the most common cause of death in the first year of life.

Annual Report of the Chief Medical Officer 2012
https://www.gov.uk/government/publications/chief-medical-officers-annual-report-2012-our-children-deserve-better-prevention-pays

National picture
In 2014, Public Health England published a key facts on infant mortality and stillbirths document (prepared by the National Child and Maternal Health Intelligence Network) http://www.chimat.org.uk/maternity/factsandfigures giving national information as described below:

Stillbirth rates in the UK are higher than might be expected in a high income country. In 2011-13, approximately one in 200 babies is stillborn (4.9 stillbirths per 1,000 births). There have been approximately 3,300 stillbirths per year in recent years. Furthermore, there has been little change in rates over the past 20 years.

Infant mortality in the UK is high. In 2011-13, one in 250 (4.1 in every 1,000) infants died in their first year of life. There have been approximately 2,800 infant deaths per year in recent years. Infant mortality is a significant factor in overall life expectancy, with 61% of all deaths in children (0-19 years) being infant deaths.

Patterns and trends in stillbirth and infant mortality

Although stillbirth rates are little changed, infant mortality has reduced considerably in the past 30 years. There was a significant fall in post-neonatal mortality after the "back to sleep" campaign in the late 1980s and early 1990s. However, the UK's perinatal and infant mortality rates remain high compared to other European states.

There was considerable variation within England in the period 2011-2013, with more than a three-fold difference in local stillbirth rates from the lowest to the highest; for infant mortality there was more than a four-fold difference from the lowest to the highest.

Causes of stillbirth and infant mortality

Most (92%) stillbirths occur before labour begins. In a majority of stillbirth registrations (54%) no explanation is recorded. Where a cause is recorded, the major reasons are asphyxia (a deficiency of supply of oxygen to the body), anoxia (deprivation of supply of oxygen) or trauma. These collectively explain 25% of stillbirths. Congenital abnormalities and chromosomal disorders, which can both lead to low growth, account for a further 15%.

The Perinatal Institute developed a new method of stillbirth classification, which identified that many 'unexplained' stillbirths were associated with foetal growth restriction. This is where the baby's growth slows or ceases in the uterus, and is often linked to suboptimal care. The institute has developed customised weight centiles and customised growth charts which take into account maternal height, weight, number of previous births and ethnic group, however these are only successful in reducing stillbirths where appropriate staff training is delivered.

Most (71%) infant deaths occur in the neonatal period (the first 27 days of life). Causes for infant mortality differ in the neonatal and post-neonatal (28 days to 1 year) periods. According to the National Perinatal Epidemiology Unit (NPEU), "neonatal mortality rates are especially sensitive to events during pregnancy, delivery and the neonatal period, and to the care given to mothers and their babies, [whilst] post-neonatal mortality is thought to be influenced to a greater extent by parental circumstances, including their socio-economic position, and the care they provide for their infant".

Infant mortality is also associated with whether babies are delivered at term or

pre-term: low birth weight may account for two thirds of neonatal deaths. Congenital abnormalities explain almost two fifths of post-neonatal deaths.

Risk factors for infant mortality
There are a number of risk factors for stillbirth and infant mortality. These include:

- child poverty
- low birth weight
- maternal age
- access to antenatal care
- smoking in pregnancy
- maternal obesity
- socioeconomic position
- multiple birth
- birth place of the mother
- influenza
- vaccination
- Sudden Unexpected Deaths in Infancy (SUDI)

Child poverty
Child poverty is one of the biggest barriers in improving outcomes for children and young people. Mothers living in poverty are more likely to be in poor health, have more psychological problems in pregnancy and smoke more.

Babies born into poor families are:

- more likely to be born prematurely and have low birth weights
- 2x more likely to die within one year of birth than those born to affluent families

For more information on child poverty in Manchester, please see the Wider Determinants of Health chapter of the JSNA.

Annual Report of the Chief Medical Officer 2012 (2013) Our children deserve better: Prevention.
https://www.gov.uk/government/publications/chief-medical-officers-annual-report-2012-our-children-deserve-better-prevention-pays

Low birth weight
Low birth weight babies are 27 times more likely to die before the age of 1 year than babies of normal birth weight.

Maternal age
Stillbirth rates are highest for mothers aged under 20 or over 40.

The impact of teenage pregnancy includes:

- 44% higher risk of infant mortality

- 25% higher risk of low birth weight babies at term
- 63% higher risk of child poverty
- 6x higher rate of maternal smoking
- 1/3 lower rate of breastfeeding initiation

(Hadley A (2014) Teenage Pregnancy Engagement Day: Building on Success, NHS Information Centre for Health and Social Care (2013) Infant feeding survey 2010, ONS (2015), Conception Statistics, England and Wales, 2013, PHE London (2014) *The health and wellbeing of children and young people in London: An evidence based resource)*

Access to antenatal care

Early booking at a maternity hospital is essential to ensure early engagement and assessment and informed choice about screening options and antenatal care in general. Late booking and poor attendance for antenatal care are associated with poor outcomes for mothers and babies.

Booking for maternity care after 12 weeks gestation is a risk factor for stillbirths and neonatal deaths. Pregnant women should be supported to access antenatal care, ideally by 10 weeks and 0 days gestation. 1 woman in every 20 who die during or after pregnancy, booked after 20 weeks gestation.

Risk factors for late booking include:

- Young age of mother (under 20 years)
- High parity (having had many babies)
- Mother from a minority ethnic group
- Mother living in temporary accommodation

16% of all pregnant women delay seeking maternity care until they are 5 months or more pregnant.

Reducing Infant Mortality in London: An evidence based resource, Public Health England 2015
https://www.gov.uk/government/publications/reducing-infant-mortality-in-london

Smoking in pregnancy

Smoking is the single most important modifiable risk factor in pregnancy. Smoking in pregnancy doubles the risk of stillbirth and accounts for:

- 1 in 12 premature births
- 1 in 5 cases of low birth weight in babies carried to full term
- 1 in 14 preterm-related deaths
- 1 in 3 Sudden Unexpected Deaths in Infancy (SUDI)

Pregnant women from unskilled occupations are 5 times more likely to smoke than professionals. Teenagers in England are 6 times more likely to smoke than older mothers aged 30-34.

(ASH (2013) *Smoking cessation in pregnancy: A call to action,* .NHS Information Centre for Health and Social Care (2013) *Infant feeding survey 2010,* PHE (London) 2014 *The health and wellbeing of children and young people in London: An evidence based resource)*

Maternal obesity

Being overweight or obese may double the odds of stillbirth, and the risk increases with BMI.

In England:

- age over 35 years is a predictive factor for maternal obesity
- 84.6% of obese mothers are white Caucasian
- 1 in 3 pregnant women with BMI ≥35 kg/m2 live in the most deprived quintile

Maternal obesity impacts on both the health of the mother and of the child.

Poorer maternal health resulting from maternal obesity can include:

- cardiac disease
- spontaneous and recurrent miscarriage
- pre-eclampsia
- gestational diabetes

Poorer babies' health resulting from maternal obesity can include:

- macrosomia (weight more than 4.5kg)
- growth restriction
- congenital anomalies e.g. cleft lip and palate
- pre term or post date (baby being born early or late)

Maternal obesity can also result in death for the mother and/or her baby.

Maternal deaths from maternal obesity include:

- 1 in 5 maternal deaths from 2003 to 2005
- Half of maternal deaths from thromboembolism and heart disease

Stillbirths and infant deaths from maternal obesity, including:

- 1 in 3 stillbirths
- 1 in 4 late foetal deaths
- 1 in 3 neonatal deaths

Women who are obese are grouped as high risk during pregnancy and require additional antenatal screening, intervention and monitoring. Additional healthcare resources are essential due to pregnancy complications and increased use of neonatal intensive care.

(Centre for Maternal and Child Enquiries (CMACE). Maternal obesity in the UK: Findings from a national project. London: CMACE, 2010, Health and Social Care Information Centre (HSCIC). Health Survey for England 2010-2012. HSCIC, 2013; NICE Public Health Guidance 27. Weight management before, during and after pregnancy. July 2010; Sellstrom, E., et al. (2009). Obesity prevalence in a cohort of women in early pregnancy from a neighbourhood perspective. BMC Pregnancy Childbirth,9, 37).

Socioeconomic position

Socioeconomic position is related to several of these risk factors. The Marmot report "Fair Society Healthy Lives" http://www.local.gov.uk/health/-/journal_content/56/10180/3510094/ARTICLE reported that "one quarter of all deaths under the age of one would potentially be avoided if all births had the same level of risk as those to women with the lowest level of deprivation". In addition, "deprivation, births outside marriage, non-white ethnicity of the infant, maternal age under the age of 20 and male gender of the infant are all independently associated with an increased risk of infant mortality".

Babies born to mothers in the routine and manual group have a 4 times higher infant mortality rate than those born to mothers in higher managerial and professional groups.

Multiple birth

Multiple births tend to have lower birth-weights than singletons and are associated with a higher risk of stillbirth.

Birth place of the mother

The infant mortality rate for babies of mothers born in the Caribbean is almost twice as high as that for babies born to mothers born in the UK.

Influenza

There is evidence that having flu during pregnancy may be associated with premature birth and smaller birth size and weight.

Vaccination

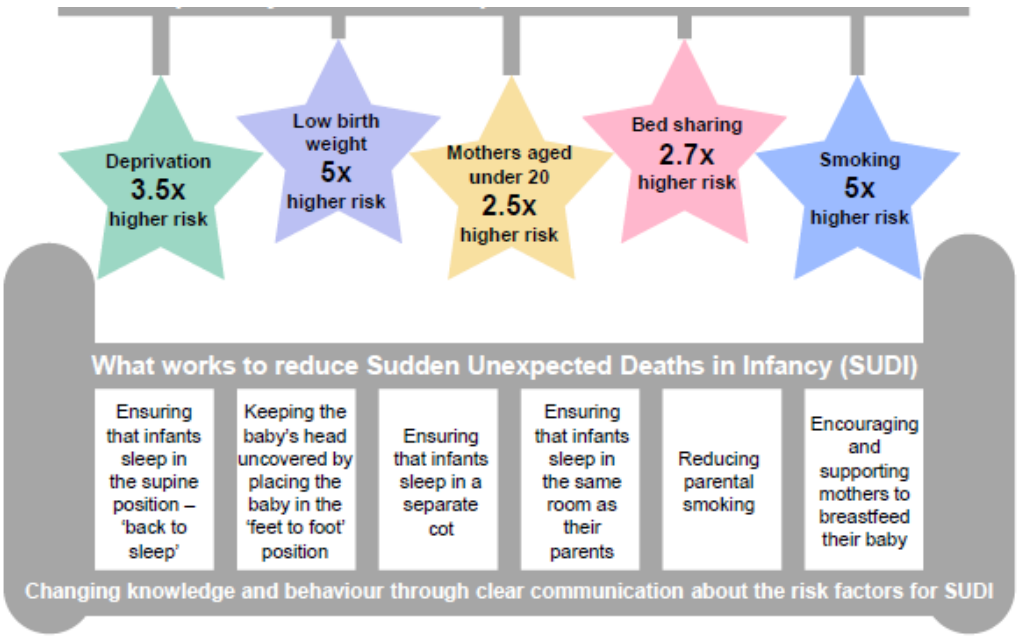
Timely and complete immunisation of children is one of the most important aspects of prevention in primary care. There are infant deaths that could be prevented if a vaccine had been given on time. See the Immunisation Programmes JSNA Topic for more details.

(PHE London (2014) *The health and wellbeing of children and young people in London: An evidence based resource;* Confidential Enquiry into Maternal and Child Health (2008) *Why Children Die: A Pilot Study Report;* DH (2010) *Vaccination and Immunisation National Support Team Six Months Progress Report)*

Sudden Unexpected Deaths in Infancy (SUDI)

The risk of sudden unexpected death in infants is increased by deprivation, low

birth weight, mothers aged under 20, bed sharing and smoking.



(Child Death Review Programme and All Wales Perinatal Survey (2015) *Sudden Unexpected Death in Infancy - A Collaborative Thematic Review 2010-2012;* http://www.who.int/tobacco/media/en/mitchell.pdf, ONS (2014) *Statistica bulletin: Unexplained Deaths in Infancy - England and Wales, 2012*

Carpenter R et al Bed sharing when parents do not smoke: is there a risk of SIDS? An individual level analysis of five major case–control studies *BMJ Open* 2013;3:e002299 doi:10.1136/bmjopen-2012-002299)

Economic impact of infant mortality
There are no current estimates of the total cost or economic impact of infant mortality at a regional or national level. Most costs can be attributed to the cost of treating preterm and low birth weight babies

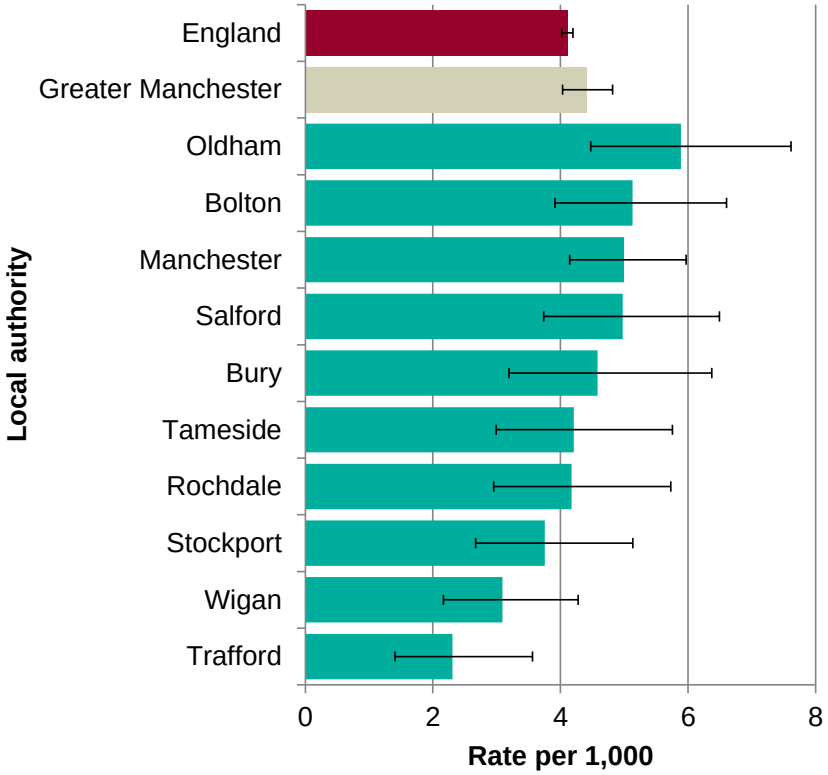
The total annual cost to the public sector in England associated with children born preterm until age 18 is around £1.24 billion, total societal costs (including parental costs and lost productivity) are about £2.48 billion. Reducing the rate of preterm birth even by a small amount, will have a significant impact on reducing this cost. Investment to increase and sustain breastfeeding rates will provide a rapid financial return on investment.

Reducing infant mortality in London: An evidence based resource, Public Health England 2015. https://www.gov.uk/government/publications/reducing-infant-mortality-in-london

The Manchester Picture

The infant mortality rate in Greater Manchester (4.4 per 1,000 live births) is **not significantly different to** the England average (4.1 per 1,000 live births).

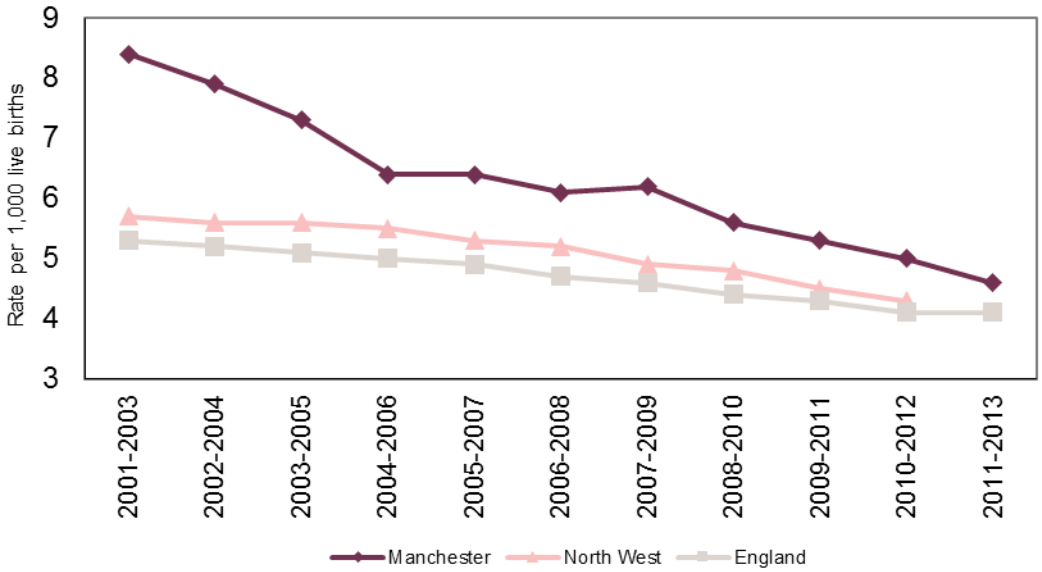
Infant mortality rates vary within Greater Manchester. In 2011-13, the infant mortality rate in Manchester was **twice as high** as it was in Trafford. Please note, however, that comparisons between local areas may be difficult due to the small number of infant deaths that occur each year. This can lead to substantial year-on-year variations and wide confidence intervals. For this reason, three-year averages are used to smooth out the greater fluctuation that arises in smaller numbers.



Source: Office for National Statistics 2015 via Public Health Outcomes Framework

Over the last decade, the number of infant deaths in Manchester has fallen by 22% and the infant mortality rate has fallen by 45% (2001-03 to 2011-13). The Manchester rate is lower than both Birmingham and Nottingham but higher than Newcastle and Bristol.

Infant Mortality Rate per 1,000 live births - three year period



Source: Office for National Statistics © Crown Copyright 2015

Time period	Number of infant deaths	Rate per 1,000		
		Manchester	North West	England
2001-03	143	8.4	5.7	5.3
2002-04	144	7.9	5.6	5.2
2003-05	141	7.3	5.6	5.1
2004-06	132	6.4	5.5	5.0
2005-07	137	6.4	5.3	4.9
2006-08	137	6.1	5.2	4.7
2007-09	144	6.2	4.9	4.6
2008-10	133	5.6	4.8	4.4
2009-11	126	5.3	4.5	4.3
2010-12	121	5.0	4.3	4.1
2011-13	112	4.6	4.4	4.1

Source: CHIMAT early years profile, Public Health England 2015.
http://atlas.chimat.org.uk/IAS/dataviews/earlyyearsprofile

The latest provisional data suggests that the infant mortality rate in Manchester in 2012-14 is unchanged from the previous period (4.6 per 1,000) but that the figure for England as a whole has fallen very slightly (from 4.1 per 1,000 to 4.0 per 1,000).

There are different stages of infant mortality with deaths categorised in 3 different time periods:

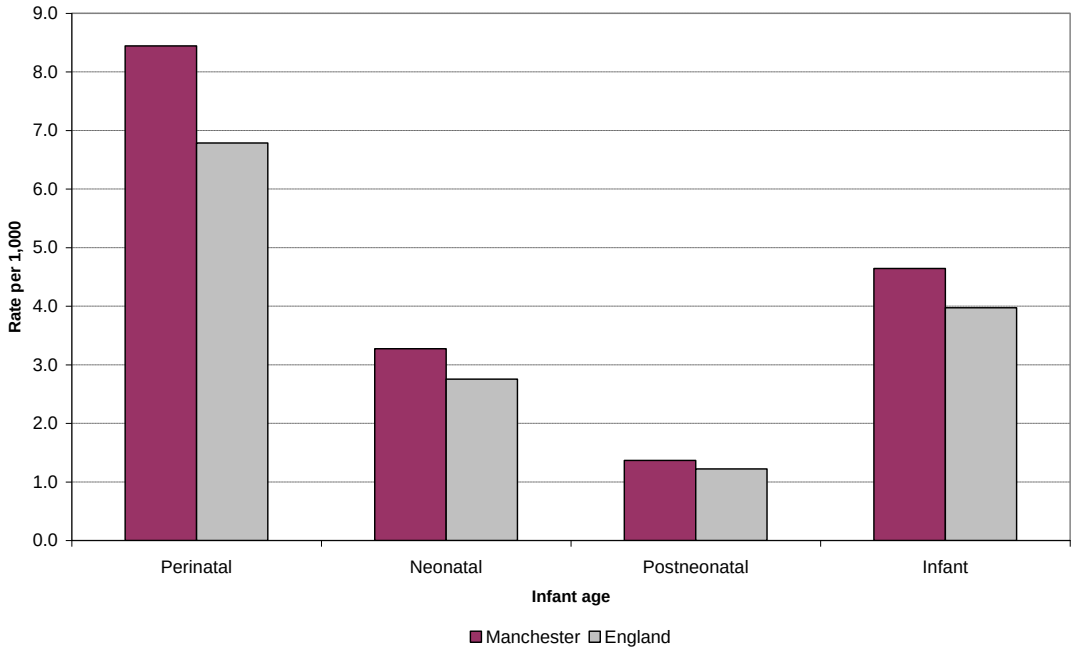
- perinatal deaths (stillbirths and deaths under 7 days)
- neonatal deaths (deaths under 28 days)
- post-neonatal deaths (deaths 28 days to 1 year)

Perinatal deaths are expressed as a rate per 1000 live and still births, whilst neonatal and post neonatal deaths are expressed as a rate per 1000 live births only. The contributing factors underneath each stage can be different.

Provisional data for the period 2012-14 (see table below) shows that the perinatal mortality rate in Manchester (8.4 per 1,000) is significantly higher than the England average (6.8 per 1,000). However, the same is not true for the neonatal, post neonatal and infant mortality rates, which are not significantly different from the England average.

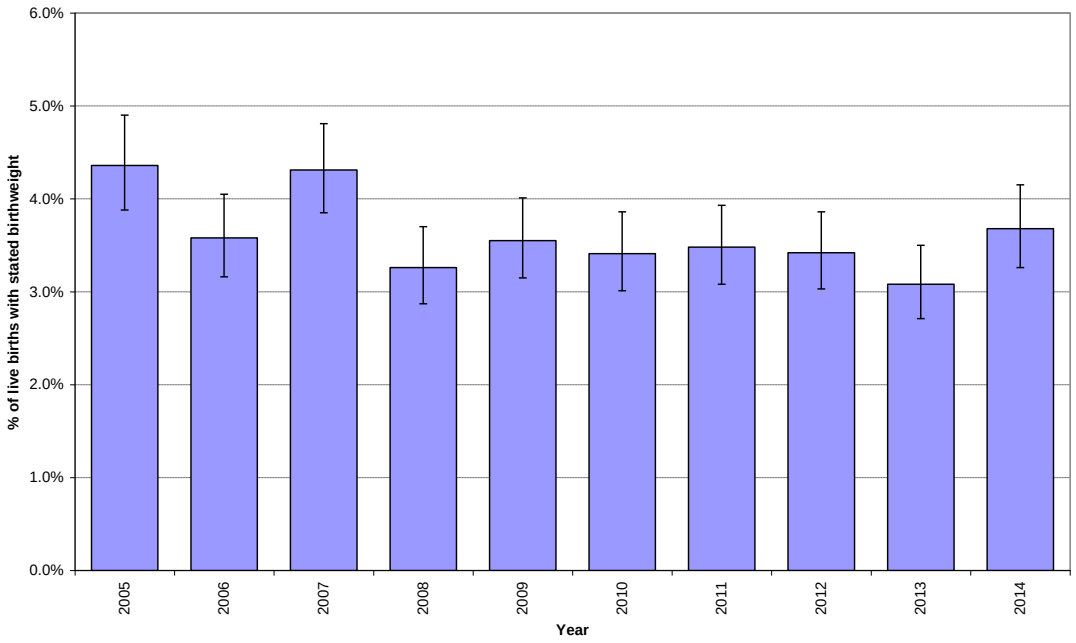
Mortality rates in infancy by gestational age, 2012-14 (provisional)

Infant age	Manchester		England	
	Total no. of deaths	Rate per 1,000	Total no. of deaths	Rate per 1,000
Perinatal	205	8.4	13,777	6.8
Neonatal	78	3.3	5,564	2.8
Post-neonatal	33	1.4	2,465	1.2
Infant	112	4.6	8,029	4.0



Low birth weight births in Manchester

The measure used in the Public Health Outcomes Framework (indicator PHOF 2.01) is based on low birth weight births of term babies, defined as live births with a recorded birth weight under 2500g and a gestational age of at least 37 complete weeks. This excludes babies who are born prematurely and are thus likely to be of lower weight due to them being born at an earlier stage of their development.



Year	Manchester			England		
	% of live births <2500g	95% Confidence limits		% of live births <2500g	95% Confidence intervals	
		Lower	Upper		Lower	Upper
2005	4.4%	3.9%	4.9%	3.1%	3.1%	3.1%
2006	3.6%	3.2%	4.1%	3.0%	3.0%	3.1%
2007	4.3%	3.9%	4.8%	2.9%	2.9%	3.0%
2008	3.3%	2.9%	3.7%	2.9%	2.9%	2.9%
2009	3.6%	3.2%	4.0%	2.9%	2.9%	3.0%
2010	3.4%	3.0%	3.9%	2.9%	2.8%	2.9%
2011	3.5%	3.1%	3.9%	2.8%	2.8%	2.9%
2012	3.4%	3.0%	3.9%	2.8%	2.8%	2.8%
2013	3.1%	2.7%	3.5%	2.8%	2.8%	2.9%
2014	3.7%	3.3%	4.2%	2.9%	2.8%	2.9%

Source: Office for National Statistics © Crown Copyright.

The annual trend in low birth weight births of term babies over the period since 2005 is variable and there is no clearly discernable pattern. The proportion has hovered at around 3.5% in the period since 2010. The most recent figures show that the proportion of low birth weight term babies has increased from 3.1% in 2013 to 3.7% in 2014, although this increase is not statistically significant. However, what is clear is that the proportion of low birth weight term babies is higher than the England average.

Low birth weight births: patterns within Manchester (2012-14)

The following data is based on all low weight births, irrespective of their gestational age and therefore will be different from the Public Health Outcomes Framework indicator described above.

Area	Avg. no. births <2500g	Avg. no of live and still births	% births <2500g
North Manchester	189	2,716	6.9%
Central Manchester	213	2,918	7.3%
South Manchester	179	2,295	7.8%
Manchester	570	7,714	7.4%
England	48,473	667,795	7.3%

In 2012, 14 the proportion of low birth weight babies in Manchester as a whole (7.4%) is not significantly higher than the England average (7.3%). Within Manchester, low birth weights are more common in the south of the city than in the north but in no part of the city is the proportion higher than the England average.

In the 3 year period 2012-2014 (pooled), the proportion of live and still born babies weighing less than 2,500g ranged from 10.2% among mothers living in Ardwick to 4.0% among mothers living in Whalley Range. Note: Data for the City Centre is not counted because of the small number of births in this ward. This compares with the Manchester average of 7.3%.

The latest data for Manchester is given in our Compendium of Statistics. http://www.manchester.gov.uk/downloads/download/5724/compendium_of_statistics-manchester

What would we like to achieve?

Many stillbirths and deaths are preventable. Reducing infant deaths and stillbirths is a priority for the NHS and government, captured in the NHS and Public Health Outcomes Frameworks. Reducing infant mortality is also a priority for Manchester, with a particular focus needed to reduce the perinatal (stillbirths and deaths under 7 days) mortality rate in Manchester.

Key interventions
The following actions on a number of interventions will reduce perinatal and infant mortality:

Maternal	Infancy	Healthcare	Wider determinants
Reducing smoking in pregnancy	Increasing breastfeeding	Ensuring access to antenatal care	Reducing overcrowding
Reducing maternal obesity	Increasing safe sleeping	Ensuring high quality neonatal intensive care	Reducing child poverty
Increasing flu vaccination uptake in pregnancy	Reducing parental smoking	Enhanced antenatal, paediatric and genetic services for certain ethnic minority groups	Improving maternal educational attainment
Additional support provided to pregnant teenagers	Additional support provided to teenage parents	Actions to improve vaccination uptake	

Department of Health Tackling inequalities in maternal and infant health outcomes: Report of the Infant Mortality National Support Team. London: Department of Health, 2010

What do we need to do to achieve this?

There are 4 key areas that we need to build on in Manchester to deliver key interventions required to reduce infant mortality. These are:

Co-ordination and leadership
Strong local leadership is vital for an effective cross agency approach to improving maternity and early years services and reducing infant mortality and to ensure that governance arrangements are in place so local areas can work together to deliver reductions in infant mortality.

Commissioning
Integrated commissioning will ensure a whole systems approach to tackling infant mortality and improving infant and maternal health. Local authorities have to work closely with colleagues in CCGs, PHE and NHS England to ensure a seamless care pathway for families between services.

Communication
Community engagement and understanding the preferences and needs of the local population is essential in developing flexible, responsive, acceptable services for the use of those who need them.

Care pathways
The development of clear care pathways is vital to support sustained improvements in service delivery and quality.

(Korkodilos M, Earwicker, R, Perry M, Thorpe A *Perspectives in Public Health* 133(1):2013 Tackling Inequalities in Infant and Maternal Health Outcomes)

There is a range of specific policies, national guidance and programmes relevant to the prevention of stillbirths and infant mortality. These include: the National Service Framework "Healthy Child Programme: Pregnancy and the first five years of life"; guidelines from the National Institute for Health and Care Excellence, such as the clinical guideline on Antenatal Care (CG62), and Public Health Guideline on "Weight management before, during and after pregnancy" (PH27); and the antenatal screening programmes.

Key interventions on maternal, infancy, healthcare and wider determinants need to be planned and delivered using a partnership approach. Some examples of what work is required are given below:

Child poverty - Addressing child poverty needs a long-term approach underpinned by early intervention and prevention, building on the assets of individuals and communities and ensuring that children's and families' needs and abilities are at the centre of service design and delivery.

Smoking in pregnancy - Reducing smoking in pregnancy includes identification and referral of pregnant women who smoke, sufficient expertise in local stop smoking services to meet the needs of pregnant women, smoking cessation training for all health professionals working with pregnant women, effective communication with women and their families and effective communication between health professionals.

Maternal obesity - Addressing maternal obesity requires seamless collaboration between professionals incorporating community-based public health services starting from preconception. Interventions should include:

- provision of health education on weight management, healthy eating, physical activity and ongoing support before, during and after pregnancy
- modifying lifestyle and environmental factors through behaviour change techniques focusing health education and weight control interventions at maternity care units within neighbourhoods most at risk.

Sudden Unexpected Deaths in Infancy (SUDI) – the following interventions are recommended to reduce the risk of SUDI:

- Ensure that infants sleep on their backs
- Keeping the baby's head uncovered by placing the baby in the 'feet to foot' position (feet at the foot of the cot)

- Ensuring that infants sleep in a separate cot
- Ensuring that infants sleep in the same room as their parents
- Reducing parental smoking
- Encouraging and supporting mothers to breastfeed their baby
- Ensuring that infants do not overheat (using correct layers of blankets)

Vaccination uptake - Actions to improve vaccination uptake include improving data collection and reporting, a comprehensive commissioning approach, staff engagement to promote uptake and effective communication to families.

(PHE London (2014) *The health and wellbeing of children and young people in London: An evidence based resource;* Confidential Enquiry into Maternal and Child Health (2008) *Why Children Die: A Pilot Study Report;* DH (2010) *Vaccination and Immunisation National Support Team Six Months Progress Report)*

What are we currently doing?

Family Nurse Partnership

The Family Nurse Partnership (FNP) is an intensive programme offered to first time pregnant mothers aged under 20. The same Family Nurse works with the families from early pregnancy up until the child is 2 years old. The programme's primary focus is the future health and well-being of mother and child and it offers structured home visiting by highly trained family nurses. The visits do not replace midwifery care but do deliver the Healthy Child Programme. The nurses use FNP programme guidelines, materials and activities to work with the mother, as well, as the father and wider family.

The Family Nurse Partnership is an internationally recognised evidence based programme, which is delivered under license. The programme works with the strengths of the client and encourages them to fulfil their aspirations for their baby and themselves. This has also been shown to extend future educational achievement, economic productivity and responsible citizenship. Advances in neuroscience and our understanding of pregnancy show how important early life is for the emotional and cognitive development of children.

The overarching aims of FNP are to:

•Improve pregnancy outcomes by helping women engage in good preventive health practices

•Improve child health and development by helping parents provide responsible and competent care for their children

•Improve the economic self-sufficiency of the family by helping parents develop a vision for their own future, including planning future pregnancies, and continuing to develop their future education and employment opportunities

FNP works with all other agencies within child and adult health and social care.

Vulnerable Baby Service

The Vulnerable Baby Service (VBS) was set up in 2004 to tackle infant mortality in Manchester, in particular sudden unexplained death of infants (SUDI). The Vulnerable Baby Service also plays a public health role in preventative practices; leading on safe sleeping policies across the city and strategically informing practice to improve outcomes for infants.

The Vulnerable Babies Service team work with multi-agency partners and health care professionals to identify and target families whose behaviours may increase the risk of Sudden Unexpected Death of an Infant. The development of the service was particularly informed by messages from Serious Case Reviews and a high number of baby deaths. The VBS facilitates case planning meetings to ensure improved outcomes for children. Referrals can be made antenatally and up to 12 months of age. The team deliver training to Midwives, Health Visitors and multi-agency partners, who work with families to reduce the risk of Sudden Infant Death.

Early Years Delivery Model

The Early Years Delivery Model is an integrated model, with 14 integrated teams of health visitors, community nursery nurses and outreach workers in Manchester. This approach started in 2013 and has been expanded to cover the whole city. From 1st April 2015 all babies born in the city will have the full range of evidence based interventions available. The model consists of an 8 stage assessment pathway at key stages in a child's life from pre-birth to 5 years of age applied to the whole population. This enables evidence-based interventions (relating to parenting and child development) to be applied for children and families identified as making less than expected progress in child development (with a particular focus on communication and language) and parental attachment, with additional support to address barriers to achieving success (e.g. low skills or worklessness, engagement with health checks, take up of free childcare and early learning etc).

The 8 stages of the model are underpinned by evidence-based assessments and interventions which are integral to the current model and include The Healthy Child Programme (health and development reviews, health promotion, parenting support, screening and immunisation programmes), New Born Behaviour Observation (NBO) and NBAS, ASQ3, Beck Depression Inventory (BDI-II), Beck Anxiety Inventory (BAI), Eyberg Child Behaviour Inventory (ECBI), Parent Stress Index, Care Index, Wellcomm screening tool and Wellcomm activities, Sollihul Approach (supporting parents to understand and respond to their child's behaviour), Every child a talker, 3-4 year old childcare, Family Nurse Partnership, IY Parent Training Programme, Video Interactive Guidance (VIG) and Pre School Psychology Clinics.

Strategic Approach

Reducing infant mortality has been identified as a key work area by the Starting Well, Developing Well team in Public Health. This work is being led by the Strategic Lead for Children and Young People's Public Health, working closely with key partners across the city.

Commissioners responsible for commissioning services across the city are working together to develop a Children and Young People's Commissioning Strategy for Manchester. This includes commissioners from Manchester City Council's Children and Young People's Commissioning team, the Public Health team and the Citywide CCG Commissioning team for Children and Young People. Ensuring that there are seamless pathways between services commissioned by different organisations is a key priority as part of this joint work, which also include commissioners from NHS England.

There are a wide range of factors and service developments In Manchester that are aimed at protecting and improving the health of our child population. These include:

- Ensuring that children's public health services support the Early Help agenda
- Ensuring that the Health Visiting Service work in partnership with Children's Centre staff to deliver the Early Years Delivery Model in Manchester
- Improving the safeguarding system to protect children
- Preventing sudden unexpected infant deaths
- Increasing childhood immunisations
- Reducing accidents in children and young people
- Reducing teenage pregnancy and improving young people's sexual health
- Supporting teenage parents
- A review on stop smoking services is underway and the support that can be offered to pregnant women will be considered in any new model.

Manchester City Council and partners will be participating in a North West Review on reducing infant mortality in Spring 2016. The review work will include a self-assessment to identify activity in place to reduce child deaths for children under 1 year old, identifying key themes and recommendations at a LA level, GM level, North West level and sharing good practice and innovation to improve outcomes. Following this sector led improvement work, a multi-agency partnership group will be established, led by the Strategic Lead for Children and Young People's Public Health, to focus on key areas of work to reduce infant mortality in Manchester.

Community and Stakeholder Views
Stakeholder views on how we can reduce infant mortality in Manchester will be sought through the North West Sector Led Improvement process in Spring 2016.

References and Links

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Other JSNA Topics that this links to

- Wider determinants of health (deprivation, housing, education, child poverty)
- Maternity
- Breastfeeding
- Smoking in Pregnancy and at Time of Delivery
- Immunisation Programmes
- Teenage Pregnancy
- Teenage Parents
- Deaths in Childhood

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