2016

North West Sector Led Improvement: Infant Mortality

Contents

Contact:

Angela Daniel – angela.daniel@tameside.gov.uk

Foreword

Giving children the best start in life is an ambition that for many is firmly rooted in all that we do, whether we are a parent, or if we work in a role that brings us into contact with children or working with prospective, new and existing parents. We all want to see children in families and the wider community have the opportunity to start life and grow into healthy children, young people and eventually adults. Sadly for some this is not the reality. Whilst we have seen a decline in infant mortality over the past 16 years, a continued effort can help to further reduce unavoidable deaths and the devastation these can cause. Through the Sector-led Improvement (SLI) process and the recommendations that flow from this, I want to ensure that every locality participating across the North West has access to evidence on actions so they are in a position to adopt best practice, in order to reduce the number of avoidable child deaths under the age of 1 year. This means ensuring that action to tackle modifiable risk factors is maximised.

Whilst supporting and enabling individual behaviour is at the heart of this action, a system wide approach is essential to ensure that all efforts are made to raise awareness and mobilise the right support and advice towards reducing risk and enabling all children to have a good start in life.

There is already a considerable amount of targeted work across the North West to tackle those modifiable risk factors that impact on infant mortality. Inter-disciplinary collaboration was key to the SLI process, bringing forward an active, passionate contribution, knowledge, insight and understanding of the range of interventions that are being delivered to effect a reduction in infant mortality. A number of challenges and opportunities to build and strengthen existing approaches and systems to assure and maximise outcomes for infants under 1 year were highlighted. These had an important focus on ensuring the consistency of implementation of what we know works; assuring good quality communication systems; and, critically, firmly positioning the work of Child Death Overview Panels (CDOPs) into local governance and accountability structures, holding the system to account for delivering action and improving outcomes. There are recommendations throughout the report that provide an excellent starting point, together with the richness of local benchmarking work that helped to inform the SLI programme, for system re-design and transformation.

This was the first North West collaborative approach to SLI, involving 22 of the 23 North West localities and bringing together a wealth of knowledge and expertise to shape future improvement work. Thank you to all who took part and supported this important programme of work.

Angela H Hardman
Executive Director of Public Health
Chair, Infant Mortality Sector Led Improvement Group

Background

In February 2015 a Child Death Overview Panel (CDOP) chair from one of the four CDOPs covering Greater Manchester (GM), attended the GM Directors of Public Health meeting and presented the GM CDOP Annual Report. Since then there have been a number of conversations about how the various recommendations within that report should be taken forward, recognising that issues, progress and approaches differ within each CDOP area. Angela Hardman (Director Public Health Tameside and GM Public Health lead for Children and Young People) met with the CDOP chairs and agreed that the first step required is to benchmark the status of each locality in relation to CDOP activity, interventions and implementation of good practice models as defined in the CDOP Annual Report received.

GM Public Health Network (GMPHN) alongside partners in Cheshire and Merseyside and Cumbria and Lancashire secured Association of Directors for Public Health (ADPH) funding as part of the regional Sector Led Improvement (SLI) network plan. This presented an exciting opportunity for Local Authorities and partners to participate and collaborate on an inter-disciplinary review across the North West on infant mortality of which 22 of the 23 North West localities took part. A stakeholder project group was established to oversee the development, implementation and evaluation of the review process.

Scope and Objectives of the Review

The SLI review focused on child deaths aged under one year, this age range accounts for around two thirds of all child deaths both locally and nationally. In addition to the benchmark aspect of the review, the objective was to share evidence on actions, and assist each locality to adopt best practice, in order to reduce the number of child deaths under one year old.

The scope included key modifiable factors such as maternal smoking, co-sleeping, safeguarding consisting of abuse and neglect, drug and alcohol misuse, consanguinity and obesity (plus other factors).

Working Together to Safeguard Children 2015 defines preventable child deaths as those in which modifiable factors may have contributed to the death. ***These factors are defined as those which, by means of nationally or locally achievable interventions, could be modified to reduce the risk of future child deaths.***

Aims of the Review

The aim of the review was to:

- Adopt an agreed SLI methodology to review action to reduce infant mortality as part of a peer review approach. The process included identifying activity which is in place to reduce deaths for those children aged under one year old, with a particular focus on modifiable factors.
- Taking an appreciative enquiry approach to identify places where actions have resulted in improved outcomes and share the learning.
- Identify key themes and recommendations at LA level, sub-regional level and North West level.
- Outcomes of the review to provide potential opportunities for collaborative work programmes which may include commissioning.
- Enable sharing of good practice and innovation to aid mutual support and drive improvement in outcomes.

- Identify any gaps in data and intelligence and provide recommendations for CDOPs.
- Produce an action plan for Local area Safeguarding Children and Adult Boards who will be responsible for oversight and implementation.

Principles

Peer Review Sector-led improvement is based on a culture of collaborative working, sharing good practice, constructive challenge and learning.

It is based on the principles of mutual support and assistance, involving a discrete process of self-assessment and peer review. It is sustainable through collective action, peer support and strategic leadership.

Underpinning Values

- Working with peers to find sustainable solutions
- Being open to constructive challenge from peers on progress and commitment
- Undertake a self-assessment that will be reviewed by peers
- Participants are accountable to their peers where there are performance issues relating to the review remit
- There is a clear series of stages in the process and areas will need to take part in all stages

Ground Rules

- Buy-in needs to be throughout the system being reviewed from front-line practitioners through to corporate leads, especially lead members and service leaders.
- Participants should adhere to the agreed timetable - since the approach requires rapid implementation and the co-operation of all areas, local areas need to respond in an open and timely manner to all requests for data, intelligence or information.
- Information shared as part of the programme should be respected and should not be shared outside of the review without permission.
- Localities need to recognise that the programme can make recommendations on the activities to be commissioned/de-commissioned but that districts are not obliged to implement recommendations. Implementation is a matter of local choice.
- Mutual help underpins this approach. Staff at all levels should be discouraged from making judgements of the services/performances in other districts.

Methodology

A stakeholder meeting was held in December 2015 with representation from various organisations and disciplines across the North West including: Director of Public Health, Local Safeguarding Children's Board (LSCB), Child Death Overview Panel, Clinical Commissioning Group (CCG), Public Health England, North West Employers and NHS England to review and agree the methodology and scope. Those that were not able to attend were provided with the proposals to enable comment.

The staged approach methodology of benchmarking data, completion of self-assessment, followed by peer review, (the methodology used by GM Public Health Network for Sector Led Improvement Peer Reviews), was agreed by all stakeholders.

Due to the number of localities involved in the review it was agreed that a single full day workshop would be the most appropriate approach to facilitate the review process. The benchmarking data for each Local Authority was collected between September and December 2015. Data from Child Death Overview Panels was collated and made available at the time the self-assessment template was distributed to participants. All documents were made available on a secure page of the GMPHN website, links were provided to participants.

The self-assessment template was developed and tested by stakeholders; the expectation was that the lead for each locality had the responsibility for coordinating the completion of the self-assessment. They ensured colleagues from different agencies including Public Health, CCG Maternity Commissioners, Maternity Service, Health Visiting Service, Local Authority Children's Service, CDOP, LSCB, Police etc. contributed to the self-assessment (where appropriate).

Once completed the self-assessments were included on the webpage so that they could be viewed by all participating localities prior to the workshop day. A summary document was produced for each locality and included on the webpage.

What the data shows

The primary purpose of CDOPs is to review individual deaths, to identify modifiable causes to inform strategic planning on how "best to safeguard and promote the welfare of the children in their area" (Working Together to Safeguard Children, 2015) that is, to learn lessons and put the lessons into practice to prevent future deaths. To meet these ends and to support the operational functions of the CDOP each CDOP collects information about each child death in their area including the conclusions of the panel review.

In addition to the local reports produced by each CDOP there is also a GM Annual Report and a NWCDOP Annual Report. These reports include the following data, with overall numbers increasing as the area expands.

- Number of notified deaths in year - Number of closed cases in year
- Deaths by age
- Cause of death by category
- Child deaths by ethnicity
- Modifiable factors identified
- Child deaths by deprivation quintile
- Expected versus unexpected deaths

In 2014/15 across the North West (23 local authorities) there were a total of 328 infant deaths (<1 year), that had been reviewed and closed. 37% of North West infant deaths were of infants from a BME background (a known risk factor) and 63% of deaths were of infants with a birth weight of less than 2500 grams. 43% of deaths were of infants whose mothers were from the most deprived quintile (quintile 1).

Of the 328, infant deaths 27% had at least one modifiable issue implicated in the death. The most common modifiable issue identified across the North West was safeguarding consisting of abuse and neglect (62% of deaths with a modifiable issue identified). The next largest modifiable issue identified was smoking (59%). 33% of infant deaths where a modifiable issue had been identified were due to drugs or alcohol misuse and 23% through co-sleeping.

Although infant mortality both nationally and regionally has declined somewhat since 2002 (table 1), it is important, if not essential, that we work to reduce the number of modifiable factors in order to continue the downward trend in child mortality rates.

Trends in rates of infant mortality for England and the Northwest 2002 - 14

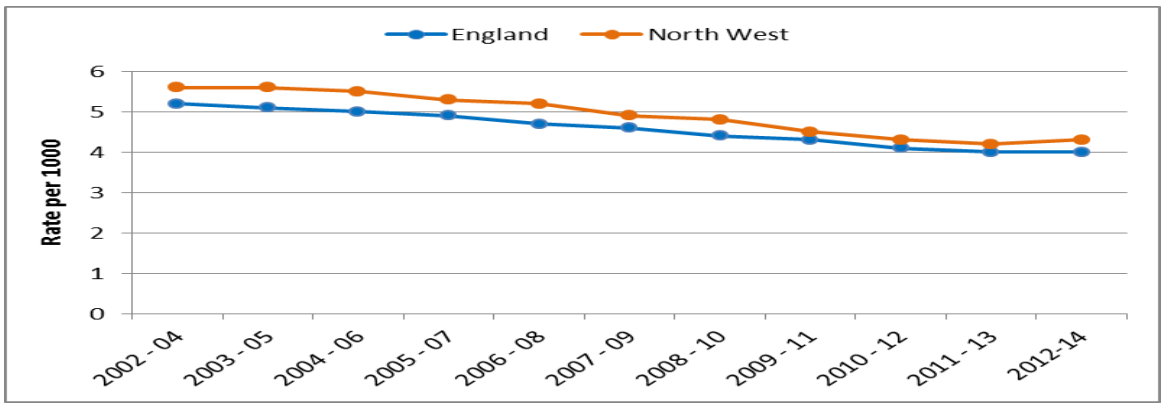

Table 1

Outcomes of the Workshop

A total of 69 professionals attended the workshop from across the 22 NW localities. They represented a multitude of professional groups such as Public Health Commissioners, Local Authority, Health Visitors, Family Nurse Partnership, CCG, Midwifery, LSCB, CDOP, Public Health England, North West Employers and NHS England to name a few.

There were 7 thematic sessions covered on the day:

- Child Death Overview Panels
- Capacity to Improve
- Safeguarding
- Congenital Abnormalities
- Co-sleeping
- Smoking in Pregnancy
- Deprivation

Each of the following sections provides a summary, context, questions posed for discussion, an overview of the discussions, followed by recommendations for across the regions and recommendations for localities.

Market Place

Attendees took part in a 'Market Place' where good practice and further work under 'themes' were presented at 'stalls' around the room. Attendees were tasked to either request further information (for good practice) or offer support (for further work) on the different themes. The intention was to enable sharing of good practice and innovation to aid mutual support and drive improvement in outcomes.

There were 168 requests for further information and 32 offers of support across the themes.

The following recommendations from the Market Place are made based on the information gathered from the different localities with interests in a particular area of work. Some of the Market Place recommendations have been placed in the topic section contained later in this report (such as safeguarding).

	Recommendations	Proposed lead
1	Task and finish group to look at campaigns which could be developed on a NW footprint such as: • Foetal Alcohol Syndrome (see Halton's social marketing campaign) • Safe sleeping campaigns (good examples in Bolton, Blackpool, St Helens, Sefton and Wirral)	Public Health England North West North West Localities
2	Establish a method of sharing good practice (including evidence of impact, improvement in outcomes and Cost Benefit Analysis) across the North West on an on-going basis.	Public Health England North West

Child Death Overview Panel (CDOP)

Responsibilities of CDOPs (Working together to safeguarding children: March 2015)

The functions of CDOP include reviewing all child deaths, excluding those babies who are stillborn and planned terminations of pregnancy carried out within the law. They collect and collate information on each child and seek relevant information from professionals and, where appropriate, family members.

They provide relevant information or any specific actions related to individual families to those professionals who are involved directly with the family so that they, in turn can convey this information in a sensitive manner to the family. They determine whether the death was deemed preventable (those deaths which include modifiable factors which may have contributed to the death) and decide what, if any actions could be taken to prevent future such deaths.

The CDOPs make recommendations to the LSCB or other relevant bodies promptly so that action can be taken to prevent future such deaths where possible. Identify patterns or trends in local data and report these to LSCB.

In reviewing the death of each child, CDOPs should consider modifiable factors and consider what action could be taken locally, regionally and nationally.

Questions discussed at the CDOP workshop:

1. *How are the local, regional and NW CDOP reports embedded across organisations? Is it used for CDOP/safeguarding or does it also filter through to Health and Wellbeing board and wider work?*
2. *Have there been any emerging issues coming through CDOP reports that we need to keep an eye on? For example more babies being born above the 95th percentile due to the increase in obesity and its impact on mortality in infants, another example is post-natal depression and self-harm.*
3. *What can be done to CDOP reports to make them more useable: for example the development of a minimum dataset to allow bench marking to occur more frequently; or standardisation of what a modifiable factor is; or more information on the characteristics of mother and baby?*

KEY ISSUES RAISED IN DISCUSSION

- Data recording, data sets and the importance of data. There was a general frustration regarding missing routine data particularly in regards to the mother's partner and that this needs to be stressed to frontline staff (this is commonly found in Serious Case Reviews). Many partners felt that there was a barrier to data sharing due to the incompatibility of I.T. systems across services. The regional and GM reports now use a minimum data set which allows benchmarking across the different geographical areas as well as year on year comparison.

- Modifiable factors. It would be useful for a piece of work to be undertaken to clarify what each CDOP classifies as 'modifiable'. There was also concern about the subjectivity of some of the data collected; the panel may find it difficult to be able to make a decision based on the material they receive; if the panel has a change of membership those decisions can be skewed by new membership or by a dominant member. Clear criteria about what constitutes a particular modifiable factor would be helpful. As data collection improves it has

become more apparent that there are a disproportionate number of BME deaths and this needs to be investigated further.

- **Governance and identified leadership**. Across the Region accountability for the CDOP report varies in its distribution and governance i.e. in some areas it goes to only the LSCB in other areas it goes to both LSCB and Health and Wellbeing Board. The annual CDOP report can be presented at LSCB, responses can be varied with accountability for recommendation implementation not identified. CDOP prioritisation is often not evident to chairs based on the lack of change in outcomes. A lack of change in outcomes suggests that some areas may not sufficiently prioritise the dissemination and follow up of CDOP recommendations or identify accountability for actions.

- **Learning from CDOPs** should be shared widely and routinely to ensure a 'wide' audience is captured. Recommendations within CDOP reports need to be SMART and ensure that all relevant agencies take responsibility. A rolling three year action plan was suggested with accountability for change and improvement to reside with the Quality Assurance group within LSCBs. It was suggested that CDOP reports should include recommendations regarding dissemination; however this may be useful to agree at a NW level to ensure wide coverage.

As with Serious Case Reviews it was felt that it would be helpful for the learning from CDOPs to feed directly into the Safeguarding Training.

	Recommendations	Proposed lead
1	Bi-annual workshop for all NW CDOP members to review the criteria for modifiable factors to agree a common data set and improve consistency	North West Child Death Overview Panel Group
2	Detailed annual reports in response to the NW and local CDOP report to go to LSCB and Health and Wellbeing Boards to ensure a local response and assurance with a clear plan to respond to actions and recommendations	Child Death Overview Panels
3	CDOPs to: • Establish a mechanism of feeding directly back to individual frontline staff regarding modifiable factors identified in infant mortality cases they have worked with. • Establish a process to share learning from CDOPs to all frontline staff (explore doing this jointly with shared learning from Serious Case Reviews) • Work with LSCB training group to ensure learning is embedded into safeguarding training	Child Death Overview Panels
4	Communication and engagement strategy to cascade key learning across NW CDOPs and back to front line practitioners.	Child Death Overview Panels

	Recommendations for individual localities	Proposed lead
1	Clearly define governance of CDOP report within individual localities	Chair of LSCB Director Public Health
2	Clarify how findings from CDOP cases within the locality are shared for action.	

Capacity to Improve

The Capacity to improve workshop focussed on two particular aspects:

- Ownership
- Visibility

Ownership – what high performing Public Health systems do:

- Have clear overall leadership for infant mortality, including clear leadership at organisational level (named individuals)
- Have good multi-agency understanding of the activities already in place and partnerships to tackle infant mortality in local areas (across public health, NHS, LA safeguarding, CCG etc.).
- Effective communication which enables partners to understand their individual efforts in the wider context of a multi-agency partnership improvement programme

Visibility – what high performing Public Health systems do:

- Ensure the relationship between the measure (especially measures for modifiable factors) and outcomes for local people/public sector services are well understood.
- Measures are included in locality level strategic discussions
- CDOP findings (annual reports) are shared appropriately with groups (commissioners and providers) which can positively impact on infant mortality (including CCG, public health, maternity services, health visiting services, local authority services, police etc.).

Questions discussed at the capacity to improve workshop:

1. *How do we ensure that reducing infant mortality is on everyone's agenda?*
2. *How do we secure ongoing and sustainable commitment to continuing to improve outcomes across all parts of the system?*
3. *Who will provide the leadership and how do we secure their commitment?*
4. *How do we make the work that is going on more visible?*
5. *How do we raise* awareness of the local facts and figures and evidence base?

KEY ISSUES RAISED IN DISCUSSION:

- Having people who are passionate and committed to reducing infant mortality was identified as a key priority. Good, strong, passionate leadership could give assurance and management as well as accountability. It can also ensure that ownership on reducing infant mortality is embedded within the local system. Leadership amongst elected members is equally as important to ensure commitment to reduce infant mortality.

- The leadership needs to be able to work across agencies/services and ensure there is an integrated response to reducing infant mortality across the locality.

- The importance of public engagement including how localities are communicating and engaging with the local population to influence behaviour change and social norms (social movement) was emphasised. It was felt that to influence the reduction in infant mortality we do need to look at organisation development to support the wider workforce and population who can influence behaviour change.

- Commissioning and contract management was discussed with the conclusion that areas need to have good contract management in place to ensure what they are commissioning is bringing the change needed to reduce infant mortality.

	Recommendations for individual localities	Proposed lead
1	Identify a named lead for reducing infant mortality within the locality	Chair of LSCB Director Public Health
2	Identify a lead elected member for reducing infant mortality	
3	Modifiable factors associated with infant mortality are firmly embedded in integration programmes	
4	Consider opportunities to influence behaviour change and social norms for modifiable factors associated with infant mortality (such as social movement).	
5	All services commissioned are evaluated to ensure they make positive changes to modifiable factors	

Safeguarding

Safeguarding is a term which is broader than 'child protection' and relates to the action taken to promote the welfare of children and protect them from harm. Safeguarding is everyone's responsibility.

Safeguarding is defined in Working together to safeguard children 2015 as:

- protecting children from maltreatment;
- preventing impairment of children's health and development;
- ensuring that children grow up in circumstances consistent with the provision of safe and effective care; and
- taking action to enable all children to have the best outcomes;
- Neglect often plays a role in child deaths.

Types of Neglect

Physical neglect:-	Poor Diet, unhygienic or dangerous home conditions, poor clothing, unsupervised.
Educational neglect:-	Poor school attendance, poor school presentation, unprepared for school, condoning problem behaviour at school, refusing to allow specialist intervention.
Emotional neglect:-	Domestic violence, lack of affection, belittling, scapegoating and blame.
Medical neglect:-	Not accessing medical, dental etc. on regular basis. Withholding medical attention in emergency, not allocating prescribed medication as directed, fabricated illness.

All Forms of Child Neglect Can Lead To A Lifetime Of Low Self Esteem and Poor Social and Emotional Development and sometimes Death

Questions included in the safeguarding workshop:

1. *What early intervention and prevention strategies are in place locally to reduce the impact of safeguarding on infant mortality?*
2. *How does your area ensure safeguarding approaches are joined up across all partners?*
3. *How responsive are we to incremental information about families?*

KEY ISSUES RAISED IN DISCUSSION

- The family dynamic and genogram was deemed important, professionals do not routinely undertake a genogram for families and an assumption is made about family connections as the nuclear family. Identification of risk factors surrounding the family is an important part of the assessment process and is crucial to preventing harm. Assessment and discussion of family norms and values was recommended as an easy way to explore family dynamics and cultures. This needs to include the wider social elements such as housing, police information and wider services which can contribute to the 'family picture'

- Use of demographic data could allow for profiling of communities where infant mortality is a risk, resulting in a differentiated delivery model in those areas, raising awareness in different ways, using community leaders to share knowledge and develop the messaging around approaches to reducing risk. Working locally provides the opportunity to build relationships (especially in those communities who are more at risk of infant mortality). There are opportunities to integrate services based in localities closer to the communities they serve.

- Information sharing: One of the most common barriers discussed was information sharing. Information sharing is a key enabler in safeguarding children and has long been identified as a key issue in Serious Case Reviews. The duty to share information at the right time is vital to safeguarding. Information should be shared as soon as risk is identified, ensuring a common assessment framework is commenced if any predisposing risk factors for infant mortality are identified. The groups questioned whether the toxic trio of mental health, drugs and domestic abuse information was available to midwives and health visitors in the antenatal period to allow a full assessment to be undertaken. The group recommended the link to the GM IM&T enabler group and GM connect work stream.

- Early help was identified as a key theme for families where previous child protection proceedings had been put in place. The group acknowledged that families are often left to continue on a path without support once a child has been removed. A review of existing successful models, noted below, would be beneficial:
    - Model of excellence in Salford Strengthening Families, proving successful supporting families in this situation to support those families who have a child removed to help plan or prevent for the next pregnancy.
    - The Blackburn model using the Adverse Childhood Experiences (ACE) criteria scoring was hailed as a model of excellence and scoring criteria applied to families to ensure an early help assessment and referral where required

A number of disparate areas where gaps or aspects of need were acknowledged:

- Thresholds of need: For professionals working in areas of high deprivation the professional's views of 'normal' had the potential to be skewed especially when frontline practice is being stretched and social norms can become distorted. There was a suggested solution that staff should rotate so they can experience 'normal' and ensure there is good supervision in place.

- Safeguarding adults: Many adults are vulnerable and require safeguarding themselves, learning disabilities was a key theme, many parents do not have the capacity to parent and need enhanced support.

- Father's role in the prevention of infant mortality: Most information, advice and guidance is targeted at mothers in the antenatal period.

- Public perception around domestic abuse and neglect: Discussion focused on whether the public fully understand (perceive) what domestic abuse is and what is neglect (public thresholds). There was a recommendation that we need to change the way we think about safeguarding; we need to change the concept of safeguarding as a social care intervention to one that is seen to offer support. This recognises that parents sometimes need help and this can be offered within and alongside local communities rather than as corporate entities working in isolation.

- Relationship between services: Was seen as both a blockage and an enabler (especially between maternity and health visiting). Having integrated services should go some way to address this with the right workforce development and integrated leadership.

- The role of CDOPs: In terms of looking forward as well as backwards to ensure there is a long term response to a family, and other children within that family, who have been impacted upon by the death of a child/infant.

Recommendations		Proposed lead
1	Support and training is required for professionals to understand respective roles in reducing infant mortality	Regional Local Safeguarding Boards in Greater Manchester, Cheshire & Merseyside, Lancashire & Cumbria)
2	Develop an approach to record all family members in the antenatal period using a structured approach such as genogram, Blackburn ACE model	Greater Manchester – Health and Social Care Partnership – Early Years Regional Local Safeguarding Boards in Cheshire & Merseyside, Lancashire & Cumbria
3	Parenting support and prevention to include fathers/partners/carers and grandparents	Greater Manchester – Health and Social Care Partnership – Early Years Regional Local Safeguarding Boards in Cheshire & Merseyside, Lancashire & Cumbria
4	Develop a NW campaign to raise awareness of neglect and domestic abuse and its impact on infant mortality for staff and the public	Regional Local Safeguarding Boards in Greater Manchester, Cheshire & Merseyside, Lancashire & Cumbria)

5	Risk and information sharing to be picked up in GM with IM&T enabler and GM Connect	Greater Manchester – Health and Social Care Partnership – GM Connect
6	Task and finish group to examine the multi-agency drug/alcohol/mental health/domestic abuse screening tool developed by Cheshire East to see if this would be useful to implement across the regions. (*This recommendation was taken from the Market Place*)	Greater Manchester – Health and Social Care Partnership – Early Years Regional Local Safeguarding Boards in Cheshire & Merseyside, Lancashire & Cumbria

	Recommendations for individual localities	Proposed lead
1	Data sharing and information governance within localities facilitates safeguarding for all agencies	Chair of LSCB Director Public Health
2	Effective partnership working including information sharing to support safeguarding.	
3	All staff working with children and families have the capacity and capability to work effectively to ensure safeguarding and understand the implications in relation to infant mortality	
4	Review working practices for professional staff working in deprived areas and ensure rotation to more affluent areas to prevent social norms becoming distorted	

Congenital Abnormalities

Background

The Born in Bradford (BiB) study, funded by the National Institute for Health Research under the Collaboration for Leadership in Applied Health Research and Care programme, and the largest of its type ever conducted, examined detailed information collected about more than 11,300 babies involved in the Born in Bradford (BiB) project, a unique long term study which is following the health of babies who were born in the city at the Bradford Royal Infirmary between 2007 and 2011. The research team found that the overall rate of birth defects in the BiB babies was approximately 3% - nearly double the national rate.

Each year, approximately 1.7% of babies in England and Wales are born with a birth defect (for example heart or lung problems or recognised syndromes such as Down's), which may be life-limiting. These disorders occur as a result of complex interactions between genetic and environmental factors, or because of damage done by infections such as rubella and cytomegalovirus.

It is important to note that the vast majority of babies born to couples who are blood relatives are absolutely fine, consanguineous marriage increases the risk of birth defect from 3% to 6%; however the overall absolute risk is small. We should also remember that consanguinity accounts for a third of birth defects.

In the Pakistani subgroup, 77% of babies born with birth defects were to parents who were in consanguineous marriages. In the White British subgroup 19% of babies with an anomaly were born to mothers over the age of 34. Links between the age of mothers and the prevalence of birth defects are already well-established.

Questions included in the congenital abnormality workshop:

1. *Based on the evidence and data above what are the optimal strategies for tackling congenital abnormality and infant mortality. How do we deal with this issue sensitively with communities? Discuss the barriers and opportunities for local action.*
2. *What range of services or programmes are/should be in place for those identified at risk of congenital abnormality based on the experience of Bradford and other areas?*

KEY ISSUES RAISED IN DISCUSSION

- Building relationships and engaging families and communities to help deal with the issue of tackling congenital abnormality and infant mortality was deemed important and included engaging various audiences such as community leaders, places of workshop, schools and political leaders. This has been done previously with constructive action being shown to have the support of the community (http://www.tandfonline.com/doi/abs/10.1080/02646838908403571?journalCode=cjri20)

- The importance of planning for pregnancy with the suggestion that information needs to be appropriate for cohorts should be considered. Preconception care needs to be reviewed to ensure it has the right service in place i.e. screening programmes.

	Recommendations	Proposed lead
1	Bi-annual North West event to share good practice such as engaging leaders within communities and places of worship	Public Health England North West
2	Task and finish group (include public representation) to identify workforce development needs for integrated services to improve cultural awareness and understanding of the issues of consanguinity and its impact on congenital abnormalities	Public Health England North West
3	Use the intelligence gained from new born screening data (held by GPs) to develop a model to engage adolescents and reinforce the risk associated with congenital abnormalities.	Public Health England North West
4	Explore whether screening programmes are cost effective and share findings across the NW	Public Health England North West

	Recommendations for individual localities	Proposed lead
1	Reliable information system to enable access to high quality intelligence to identify 'at risk' population groups	Chair of LSCB Director Public Health
2	Preconception care in place which targets 'at risk' groups of congenital abnormality	
3	Outreach worker in each locality where there is a high rate of congenital abnormality	
6	Engage with community leaders and families in high risk groups to communicate messages about consanguinity and the advantages of genetic screening	

Co-sleeping

Significant progress has been made in reducing Sudden Infant Death Syndrome (SIDS) in the past 20 years in the UK. In 2013 249 (0.36 per 1000 live births) unexplained deaths occurred in England and Wales. More than half of these deaths occurred in unsafe sleeping circumstances.

National risk factors are baby's sex, birthweight, maternal age, marital status, sleeping position, sleep environments, not breastfeeding, temperature and smoking.

During 10 years: 2004 – 2013 Wales and the NW had highest rates at 0.54 and 0.53 deaths per 1000 live births. In 2013 the rate in NW was 0.45.

NICE guidance says:
Parents or carers with a child under the age of 1 should be advised / informed about the factors associated with co-sleeping (falling asleep with your baby in a bed, or on a sofa or chair) and Sudden Infant Death Syndrome (SIDS) to allow them to weigh up the possible risks and benefits and decide on sleeping arrangements that best fit their family.

The following is to inform localities to help reduce SIDS:

Parents/carers should be advised never to fall sleep with their baby especially:

- If they or their partner smoke or smoked in the ante natal period, even if they never smoke in bed or at home.
- If they or their partner have been drinking alcohol.
- If they or their partner take medication or drugs (prescribed or otherwise) which cause drowsiness.
- If they or their partner feel very tired.
- If their baby was low birth weight (less than 2.5kg)
- If their baby was premature (born before 37 weeks)

Factors which increase risk

There is an association between sudden infant death syndrome if certain risk factors are present, these include:

- If the mother has smoked at all during the ante-natal period or either parent is a smoker (Carpenter 2004).
- Co-sleeping (Carpenter et al, 2013, Carpenter et al 2006, Hauck et al 2004, Carpenter et al, 2004).
- Sleeping prone (face down) has a higher risk of SUDI (Beal 1999, Mitchell 1991).
- Low birth weight babies / prematurity -under 2.5kg/under 37 weeks gestation (Blair et al 2006, Carpenter 2006, Mitchell 2007).
- Overheating as a result of overwrapping, inappropriate bedding, swaddling or illness (Carpenter et al 2004, Fleming et al 1996, Gilbert et al 1992, Williams et al 1996).
- Changes in sleeping circumstances e.g. holidays or staying with friends or relatives.

- Previous SUDI, possibly because some risk factors are still present. Referral to the Care of Next Infant (CONI) programme should be offered.
- Depression
- Drugs and alcohol abuse (Blair et al 1999, Blair et al 2009).
- Use of prescribed medication which may impair parental consciousness.
- Conditions affecting spatial awareness e.g. diabetes, epilepsy and blindness.

Known protective factors

- Reducing or quitting smoking in pregnancy reduces the risk of SUDI
- Placing a baby to sleep on his or her back in their own cot carries the lowest risk of SUDI. It does not increase the risk of choking in a healthy baby.
- Room sharing (sleeping in parents' bedroom) for the first six months of life lowers the risk.
- Several studies have found that breast feeding has health benefits for both mother and baby. Breastfeeding has been shown to significantly reduce the risks of SIDS. It is recognised that mothers who bring their babies into bed to feed tend to continue to breastfeed longer than those who do not. However, no studies have found co-sleeping under any circumstances to be safe, and some studies have shown a significant risk, even if the parents are non-smokers (Carpenter et al 2013).
- In circumstances where parents indicate that they intend to bed share, then advice from the UNICEF leaflet "Sharing a bed with your Baby" can be downloaded from www.babyfriendly.org.uk/pdfs/sharingbedleaflet.pdf. or "Caring for your baby at night: A guide for parents" www.unicef.org.uk/caring at night.
- Having an infant sleep plan and routine particularly if change in sleep environment e.g. staying with friends/relatives overnight.
- Ensure the room temperature is between 16-18°c and avoid over wrapping or swaddling an infant.
- The correct use of lightweight cellular blankets or British standard baby sleeping

Questions included in the co-sleeping workshop:

1. *What are the barriers to ensuring all workers, who come into contact with families or carers of babies, know and can communicate the risks and safety measures related to co-sleeping?*
2. *Given your knowledge of your local co-sleeping related deaths, what recommendations would you make to improve messages and understanding? Do you think that a multi-agency approach to reducing infant mortality would be useful and how would that look?*

KEY ISSUES RAISED IN DISCUSSION

- Barriers which impact on the decision making process for parents around co-sleeping with their baby, included belief in the message, conflicting messages (such as attachment), variety of available information, inappropriate products sold/marketed, covert behaviour and stigma associated with inappropriate behaviours (such as smoking) leads to denial to professionals and inconsistent advice from professionals

- It was felt that there should be more social marketing on safe sleeping and clearer/simpler messages throughout the professional world and beyond (communities, 3rd sector etc.). There were suggestions of making this modifiable factor part of a soap storyline and linking in with the wider media and social networking to widen the audience it engages.

	Recommendations	Proposed lead
1	Midwives and Health Visitors to undertake assessment of the sleeping environment	Greater Manchester – Health and Social Care Partnership – Early Years Regional Local Safeguarding Boards in Cheshire & Merseyside, Lancashire & Cumbria
2	Using Starting Well national guidance provide simple, clear and consistent messages regarding safe sleeping to all staff.	Greater Manchester – Health and Social Care Partnership – Early Years Regional Local Safeguarding Boards in Cheshire & Merseyside, Lancashire & Cumbria
3	Insight work to be undertaken to understand how messages are received but why they are not followed	Regional Local Safeguarding Boards in Greater Manchester, Cheshire & Merseyside, Lancashire & Cumbria)
4	Highlight powerful case studies which show the devastating impact of Sudden Infant Death Syndrome	Regional Local Safeguarding Boards in Greater Manchester, Cheshire & Merseyside, Lancashire & Cumbria)

	Recommendations for individual localities	Proposed lead
1	Ensure clear and consistent messaging for safe sleeping across all agencies within the locality and include wider services such as 3rd sector, social media, forums (e.g. mumsnet), housing, guest houses etc. using Starting Well National Guidance	Chair of LSCB Director Public Health

Smoking in pregnancy

Overall, smoking during pregnancy increases the risk of infant mortality by around 40%. It has been estimated that a 10% reduction in infant and foetal deaths could be achieved if all pregnant women stopped smoking. The case for targeting pregnant smokers is clear; smoking is the single most modifiable risk factor for adverse outcomes in pregnancy. The cost of smoking in pregnancy is borne not only by the woman herself but by her unborn child, her family and the broader health and social care systems which support her; with impacts in the short, medium and long term.

Tobacco smoke brings over 4,000 chemicals into the body, including 200 known poisons and 69 carcinogens. Every cigarette smoked during pregnancy introduces carbon monoxide into the maternal bloodstream and disrupts the foetal oxygen supply for around 15 seconds and in turn reduces the oxygen flow to the foetus for a period of around 15 minutes.

Smoking, and maternal exposure to tobacco smoke, during pregnancy increases the risk of:
ectopic pregnancy; miscarriage; placental abnormalities and premature rupture of the foetal membranes; still-birth; preterm delivery; low birth weight (under 2,500 grams); perinatal mortality; sudden infant death syndrome

More than a quarter of cases of sudden infant death syndrome (SIDS) are attributable to maternal smoking during pregnancy. The risk is tripled for the babies of mothers who smoke both during and after pregnancy and the greater the number of cigarettes smoked the greater the risk.

Research studies have confirmed the correlation between maternal smoking and lower birth weight. Babies born to women who smoke during their pregnancy are an average 175-200g lighter than those born to non-smoking mothers. This is significant given that low birth weight is the single most important risk factor in perinatal and infant mortality.

Antenatal exposure to maternal smoking risks not only to the viability of the pregnancy but to the immediate and future health and the physical and intellectual development of the child increasing risk of: congenital abnormalities i.e. cranial, eye and facial defects including cleft lip and palate; impaired lung function and cardio-vascular damage; acute respiratory conditions such as asthma; problems of the ear, nose and throat; attention deficit and hyperactivity disorder (ADHD); learning difficulties.

Babies born to mothers who smoke are further disadvantaged as those mothers are less likely to breastfeed than non-smoking mothers and those who do, produce a smaller amount of milk and breastfeed for a shorter time. There is a strong link between cigarette smoking and socio-economic group. In 2014, 30% of adults in routine and manual occupations smoked compared to 13% in managerial and professional occupations.

In the UK around 207,000 children start smoking every year. Very few children are smokers when they start secondary school: among 11 year olds less than 0.5% are regular smokers. The likelihood of smoking increases with age so that by 15 years of age 8% of pupils are regular smokers. Among children who try smoking it is estimated that between one third and one half are likely to become regular smokers within two to three years.

Smoking initiation is associated with a wide range of risk factors including: parental and sibling smoking, the ease of obtaining cigarettes, smoking by friends and peer group members, socioeconomic status, exposure to tobacco marketing, and depictions of smoking in films, television and other media.

Children who live with parents or siblings who smoke are up to 3 times more likely to become smokers themselves than children of non-smoking households. It is estimated that, each year, at least 23,000 young people in England and Wales start smoking by the age of 15 as a result of exposure to smoking in the home.

Questions included in the smoking in pregnancy workshop:

1. *Based on the evidence and data above how can we ensure every pregnant woman who smokes is identified as early as possible in pregnancy and offered effective support to quit and stay quit? Discuss current barriers and opportunities for local implementation of NICE Guidance PH26?*
2. *Are there opportunities to integrate interventions and programmes on smokefree pregnancy into other pregnancy focused interventions?*

KEY ISSUES RAISED IN DISCUSSION

- There are opportunities to decrease the prevalence of smoking amongst pregnant women using a number of programmes in localities across the North West that target pregnant women who smoke and their families, communicating the risks and providing cessation support. It was acknowledged that reducing smoking prevalence within the general population would impact on rates of pregnant smokers and the number of children exposed to secondhand smoke. Continued efforts to stem the flow of new smokers and to support smokers to quit will reduce smoking prevalence and make non-smoking a societal 'norm'.

- All health and social care professionals have a role to play in communicating the risks of smoking in pregnancy and secondhand smoke. Midwives and Health Visitors were identified best placed to engage and intervene at the right time (both with pregnant women and their partners). A number of Maternity Department's operate a mandatory CO monitor test at booking and at 20 week scan with robust referral pathways in place to offer immediate cessation support (with an 'opt out' system is in place). Evidence shows that cessation rates are higher when CO monitors are used consistently.

- Further work is required to engage with proportion of women that do not attend midwifery department appointments as it is this cohort who are most at risk. Data gathered by Salford's Family Nurse Partnership identified that the majority of women on the caseload were smoking. Schemes such as Smokefree Incentive Schemes and BabyClear were identified as effective models to reduce smoking in pregnancy in these groups.

- A consistent language/narrative is required to effectively communicate the risks associated with smoking during pregnancy / secondhand smoke. Strong lines of communication between Community Midwives and Health Visitors in St Helens has seen positive cessation results and high levels of both staff and patients satisfaction.

The following was referenced as 'good practice' examples:

- Evidence based Smokefree Pregnancy Incentive schemes – 4 week quit / 12 week quit (70% quit rate at delivery)
- Healthy Community Pharmacies provide cessation intervention upon purchase of pregnancy test kit.
- Smoking cessation intervention delivered at by sonographers at scan appointment (Blackpool)
- BabyClear programme

There are opportunities to target specific groups such as girls aged 13-15 years old; couples who are planning to start a family and partners of pregnant women/new fathers. Exposure to secondhand smoke is a risk factor, particularly in younger children, and so smokefree homes schemes were seen as an essential offer within localities. Further work is required to determine effective approaches to engage with those women who do not attend midwifery appointments

Recommendations		
1	Mandatory CO Monitor testing at booking and at 20 week midwifery appointments for all pregnant women/ partners and immediate referral	Greater Manchester – Health and Social Care Partnership – Early Years Regional Local Safeguarding Boards in Cheshire & Merseyside, Lancashire & Cumbria
2	Consistent practice across the NW – All hospitals to adopt 'opt-out' referral system after identifying pregnant smokers using carbon monoxide monitors. There is evidence that this increases the numbers of pregnant smokers setting quit dates and reporting smoking cessation.	Greater Manchester – Health and Social Care Partnership – Early Years Regional Local Safeguarding Boards in Cheshire & Merseyside, Lancashire & Cumbria
3	Share good practice across NW of engaging with women who do not attend midwifery appointments	Public Health England North West
4	All NW LAs to adopt BabyClear system-wide approach to identifying, referring and supporting pregnant women to stop smoking support, including awareness raising & engagement, training, performance management, monitoring and evaluation	Greater Manchester – Health and Social Care Partnership – Early Years Regional Local Safeguarding Boards in Cheshire & Merseyside, Lancashire & Cumbria
5	Develop a template for a North West policy on smoking and secondhand smoke to reduce infant mortality that could be used locally	Public Health England North West
6	To explore opportunities to embed smoking into Ofsted framework to add traction within schools/academies (Blackburn currently exploring opportunities for public health within Ofsted)	Greater Manchester – Health and Social Care Partnership – Theme 1 Regional Local Safeguarding Boards in Cheshire & Merseyside, Lancashire & Cumbria
7	Task and finish group to review the various good practice around smoking in pregnancy and at time of delivery learning from the following • Commissioning and delivery of effective stop smoking service to pregnant women from the maternity service (Rochdale) • Smoking in pregnancy – range of initiatives – midwife	Public Health England North West

	delivered, baby clear pathway, incentive scheme etc. (St Helens) • BabyClear and development of a stop Smoking Incentive scheme aimed at pregnant women (Stockport) • Tommy's research project re. interventions for young pregnant women (Blackpool) • Specialist advisor re. smoking cessation for pregnant women – outreach for vulnerable groups and home visits (Blackpool) • Midwives trained to provide CO monitoring, brief intervention and referral (Bury) And make recommendations across the NW. (*This recommendation was taken from the Market Place*)	

	Recommendations for individual localities	Proposed lead
1	Smoking cessation targets for midwives and health visitors.	Chair of LSCB Director Public Health
2	Smoking cessation interventions at 20 week scan delivered by trained sonographers (Blackpool model)	
3	Healthy Community Pharmacies provide cessation intervention upon purchase of pregnancy test kit. Opportunities for Public Health interventions.	
4	Improve referral pathways to enable immediate cessation support	
5	Implement evidence based smoking and pregnancy incentive scheme – other 'softer' rewards such as certificates of achievement are extremely valuable / motivational tools.	

Deprivation

Importance of the first years of life

What a child experiences during the early years lays down a foundation for the whole of their life. Development begins before birth when the health of a baby is crucially affected by the health and well-being of their mother. Low birth weight in particular is associated with poorer long-term health and educational outcomes.

Socially graded inequalities are present prenatally and increase through early childhood. Maternal health and wellbeing and early years services are key to support vulnerable families with young children.

Based on this analysis, 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.

Progress to date

In the last 10 years public health approaches to reducing infant mortality has improved outcomes but inequality remain stubborn in some of our most socially disadvantaged communities.

Tackling inequalities in health and outcomes needs a whole system approach and a concerted focus on the early years.

In the environment of reducing resources a range of services aimed at the most vulnerable mothers and children have been negatively impacted by cuts to children's centres, outreach work, community support programmes and peer support. As the public sector reduces there is a risk that outcomes worsen.

Questions included in the deprivation workshop:

How does your service 'offer' differ for those mothers (and families) who are pregnant and come from a more deprived area?
How do we identify good practice or emerging innovation in early years?
How can we roll it out at pace and evaluate it in real time?

KEY ISSUES RAISED IN DISCUSSION

- Patients who develop a therapeutic relationship with their GP will often share a wealth of information (both clinical and non-clinical) that can be harnessed to support those who are in the greatest need. Further work is needed to identify deprived individuals / families and the GP Practices that serve them. Work is ongoing within GM to develop a scaled approach to finding and treating the most deprived people across the conurbation. This 'find and treat' work includes the development of a visualisation tool that identifies GP practices located in the most deprived areas/or GP Practices with the most deprived populations.

- Marmot (2010) highlighted the importance of patient empowerment through expert patient programmes for example, strengthening pathways to work; and co-designing services with communities. There are many examples of co-production across the North West, however it was acknowledged during the discussions that a cultural shift was needed in order to nurture 'social movements' within our communities to enable people to make their own informed life-style choices and create new platforms for full engagement.

- Breastfeeding support programmes and smokefree pregnancy incentive schemes were referenced during discussions as effective programmes that support behaviour change. The benefits of integrated, multi-disciplinary teams were discussed, and how a shared intelligence between health and social care professionals (including soft intelligence) would enable services to provide an intense and focused support package for those with the greatest need.

- In Greater Manchester, the devolution of health and social care provides an opportunity to develop a new approach to addressing the needs of differing communities, be that through longer appointment times, different care support, a scaled up offer around social prescribing and/or pathways into work. A balance of evidence based practice and innovation should be encouraged in order to drive change.

- Enabling the accessibility of current data and intelligence for vulnerable individuals and their families was deemed important. However, there is the risk that services will be unable to cope with increased referrals (particularly vulnerable families).

- Services should be continuously evaluated and assessed to determine if outcomes are being achieved and to inform re-commissioning though it was acknowledged that this presented a financial challenge to localities.

- There is opportunity to utilise Ofsted scrutiny to identify need and / or solutions to drive pupil premium investment. Collaboration across local authorities, housing, health and social care is essential in order to deliver better health and wellbeing outcomes and to reduce health inequalities in the North West. There are examples of successful collaborations between the housing sector and the health and social care sector that improve health and wellbeing across the housing tenure.

	Recommendations	Proposed lead
1	Share models of supporting families from deprived communities (learning from enhanced midwifery service in Tameside and integrated health service team in Wigan which support top 2% most deprived)	Greater Manchester – Health and Social Care Partnership – Early Years Regional Local Safeguarding Boards in Cheshire & Merseyside, Lancashire & Cumbria
2	Engage with a range of partners, third sector and statutory, to explore opportunities such as the development of the Fire and Rescue Service home check model to support families, housing and health programmes and economic initiatives	Greater Manchester – Health and Social Care Partnership – Theme 1 Regional Local Safeguarding Boards in Cheshire & Merseyside, Lancashire & Cumbria
3	Share the learning from the 'Find and treat' work in GM	Greater Manchester – Health and Social Care Partnership – Theme 1 Regional Local Safeguarding Boards in Cheshire & Merseyside, Lancashire & Cumbria

	Recommendations for individual localities	Proposed lead
1	Services provide an additional 'offer' to families who are most deprived e.g. free vitamins for pregnant mothers, smoking incentive schemes, pathways to employment/education	Chair of LSCB Director Public Health

Next steps

This report represents a significant amount of work undertaken over the past 12 months enabled with the support and contribution of a wide range of individuals with a passion for improving outcomes for children. The report brings together an important set of recommendations for improvement action across the North West and in individual localities. Delivery of this improvement will be reliant on the content of the report being firmly embedded within local improvement plans and delivery models.

To this end, the report will be:

- Circulated and presented to all Local Safeguarding Children and Adult Boards and Health and Wellbeing Boards across the North West with a recommendation that local plans are developed to enable implementation of the report recommendations.
- Presented to the Greater Manchester Health and Social Care Partnership and GM Children's Safeguarding Board to align regional recommendations with strategic initiatives and priorities
- Presented to CHAMPS and Lancashire & Cumbria to align recommendations with network and local strategic plans.
- Circulate the SLI evaluation report to the Association of Directors of Public Health with the proposal that a 12 month follow up evaluation takes place.

Acknowledgements

To everyone who participated in the SLI process and specifically to Angela Daniel from the GM Public Health Network Team for her commitment and support in bringing this important piece of work to fruition.

Thank you to the Infant Mortality Sector Led Improvement Group:

Angela Hardman Executive Director of Public Health, Chair - Infant Mortality Sector Led Improvement Group
Angela Daniel Programme Manager, Greater Manchester Public Health Network
Helen Marsh Policy Analyst, Greater Manchester Public Health Network
Mick Lay Greater Manchester CDOP chair
Irene Wright Merseyside Child Death Overview Panel Manager, Liverpool Safeguarding Children Board
Jacqui Dorman Public Health, Intelligence Manager, Tameside
Debbie Blackburn Assistant Director Public Health Nursing, Salford City Council
Pippa Tavriger Public Health Practitioner, Liverpool City Council
Peter Elton Clinical Director, Greater Manchester Strategic Clinical Network
Paula Hawley-Evans Health and Well Being Programme Lead, Public Health England North West
Claire Haigh Director of Improvement, NW Employers
Gifford Kerr Consultant in Public Health, Blackburn with Darwen Borough Council
Abdul Razzaq Director of Public Health Trafford Council and NW Public Health Chair
Debbie Fagan South Sefton CCG
Janice Bleasdale Specialist Nurse for the Child Death Overview Panel, Cheshire East
Chris McLoughlin Director Safeguarding & Prevention Stockport MBC
Mark Brown Programme Manager Greater Manchester Public Health Network
Hakeel Qureshi Programme Manager Greater Manchester Public Health Network
Emily Parry-Harries Speciality Registrar Public Health, Tameside MBC
Jane Rossini Deputy Centre Director, Public Health England North West
Rebecca Wagstaff Deputy Director, Health and Wellbeing Board, Public Health England North West
Liz McQue Chief Executive, NW Employers

Localities who took part in the Review

Greater Manchester

- Bolton
- Bury
- Manchester
- Oldham
- Rochdale
- Salford
- Stockport
- Tameside
- Trafford
- Wigan

Cheshire and Merseyside

- Sefton
- Liverpool
- Knowsley
- Cheshire East
- St Helens
- Cheshire West and Chester
- Halton
- Warrington
- Wirral

Lancashire and Cumbria

- Lancashire
- Blackburn with Darwen
- Blackpool

Appendix A – List of Recommendations

Regional

	Recommendations	Proposed lead
1	Task and finish group to look at campaigns which could be developed on a NW footprint such as: • Foetal Alcohol Syndrome (see Halton's social marketing campaign) • Safe sleeping campaigns (good examples in Bolton, Blackpool, St Helens, Sefton and Wirral)	Public Health England North West North West Localities
2	Establish a method of sharing good practice (including evidence of impact, improvement in outcomes and Cost Benefit Analysis) across the North West on an on-going basis.	Public Health England North West
3	Bi-annual workshop for all NW CDOP members to review the criteria for modifiable factors to agree a common data set and improve consistency	North West Child Death Overview Panel Group
4	Detailed annual reports in response to the NW and local CDOP report to go to LSCB and Health and Wellbeing Boards to ensure a local response and assurance with a clear plan to respond to actions and recommendations	Child Death Overview Panels
5	CDOPs to: • Establish a mechanism of feeding directly back to individual frontline staff regarding modifiable factors identified in infant mortality cases they have worked with. • Establish a process to share learning from CDOPs to all frontline staff (explore doing this jointly with shared learning from Serious Case Reviews) • Work with LSCB training group to ensure learning is embedded into safeguarding training	Child Death Overview Panels
6	Communication and engagement strategy to cascade key learning across NW CDOPs and back to front line practitioners.	Child Death Overview Panels
7	Support and training is required for professionals to understand respective roles in reducing infant mortality	Regional Local Safeguarding Boards in Greater Manchester, Cheshire & Merseyside, Lancashire & Cumbria)
8	Develop an approach to record all family members in the antenatal period using a structured approach such as genogram, Blackburn ACE model	Greater Manchester – Health and Social Care Partnership – Early Years Regional Local Safeguarding Boards in Cheshire & Merseyside, Lancashire & Cumbria
9	Parenting support and prevention to include fathers/partners/carers and grandparents	Greater Manchester – Health and Social Care Partnership – Early Years

	Recommendations	Proposed lead
		Regional Local Safeguarding Boards in Cheshire & Merseyside, Lancashire & Cumbria
10	Develop a NW campaign to raise awareness of neglect and domestic abuse and its impact on infant mortality for staff and the public	Regional Local Safeguarding Boards in Greater Manchester, Cheshire & Merseyside, Lancashire & Cumbria)
11	Risk and information sharing to be picked up in GM with IM&T enabler and GM Connect	Greater Manchester – Health and Social Care Partnership – GM Connect
12	Task and finish group to examine the multi-agency drug/alcohol/mental health/domestic abuse screening tool developed by Cheshire East to see if this would be useful to implement across the regions. (*This recommendation was taken from the Market Place*)	Greater Manchester – Health and Social Care Partnership – Early Years Regional Local Safeguarding Boards in Cheshire & Merseyside, Lancashire & Cumbria
13	Bi-annual North West event to share good practice such as engaging leaders within communities and places of worship	Public Health England North West
14	Task and finish group (include public representation) to identify workforce development needs for integrated services to improve cultural awareness and understanding of the issues of consanguinity and its impact on congenital abnormalities	Public Health England North West
15	Use the intelligence gained from new born screening data (held by GPs) to develop a model to engage adolescents and reinforce the risk associated with congenital abnormalities.	Public Health England North West
16	Explore whether screening programmes are cost effective and share findings across the NW	Public Health England North West
17	Midwives and Health Visitors to undertake assessment of the sleeping environment	Greater Manchester – Health and Social Care Partnership – Early Years Regional Local Safeguarding Boards in Cheshire & Merseyside, Lancashire & Cumbria
18	Using Starting Well national guidance provide simple, clear and consistent messages regarding safe sleeping to all staff.	Greater Manchester – Health and Social Care Partnership – Early Years Regional Local Safeguarding Boards in Cheshire & Merseyside, Lancashire & Cumbria
19	Insight work to be undertaken to understand how messages are received but why they are not followed	Regional Local Safeguarding Boards in Greater Manchester, Cheshire & Merseyside, Lancashire & Cumbria)

	Recommendations	Proposed lead
20	Highlight powerful case studies which show the devastating impact of Sudden Infant Death Syndrome	Regional Local Safeguarding Boards in Greater Manchester, Cheshire & Merseyside, Lancashire & Cumbria)
21	Mandatory CO Monitor testing at booking and at 20 week midwifery appointments for all pregnant women/ partners and immediate referral	Greater Manchester – Health and Social Care Partnership – Early Years Regional Local Safeguarding Boards in Cheshire & Merseyside, Lancashire & Cumbria
22	Consistent practice across the NW – All hospitals to adopt 'opt-out' referral system after identifying pregnant smokers using carbon monoxide monitors. There is evidence that this increases the numbers of pregnant smokers setting quit dates and reporting smoking cessation.	Greater Manchester – Health and Social Care Partnership – Early Years Regional Local Safeguarding Boards in Cheshire & Merseyside, Lancashire & Cumbria
23	Share good practice across NW of engaging with women who do not attend midwifery appointments	Public Health England North West
24	All NW LAs to adopt BabyClear system-wide approach to identifying, referring and supporting pregnant women to stop smoking support, including awareness raising & engagement, training, performance management, monitoring and evaluation	Greater Manchester – Health and Social Care Partnership – Early Years Regional Local Safeguarding Boards in Cheshire & Merseyside, Lancashire & Cumbria
25	Develop a template for a North West policy on smoking and secondhand smoke to reduce infant mortality that could be used locally	Public Health England North West
26	To explore opportunities to embed smoking into Ofsted framework to add traction within schools/academies (Blackburn currently exploring opportunities for public health within Ofsted)	Greater Manchester – Health and Social Care Partnership – Theme 1 Regional Local Safeguarding Boards in Cheshire & Merseyside, Lancashire & Cumbria
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	Recommendations	Proposed lead
	(Stockport) • Tommy's research project re. interventions for young pregnant women (Blackpool) • Specialist advisor re. smoking cessation for pregnant women – outreach for vulnerable groups and home visits (Blackpool) • Midwives trained to provide CO monitoring, brief intervention and referral (Bury) And make recommendations across the NW. (*This recommendation was taken from the Market Place*)	
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30	Share the learning from the 'Find and treat' work in GM	Greater Manchester – Health and Social Care Partnership – Theme 1 Regional Local Safeguarding Boards in Cheshire & Merseyside, Lancashire & Cumbria

Local

	Recommendations for individual localities	Proposed lead
1	Clearly define governance of CDOP report within individual localities	Chair of LSCB Director Public Health
2	Clarify how findings from CDOP cases within the locality are shared for action.	
3	Identify a named lead for reducing infant mortality within the locality	Chair of LSCB Director Public Health
4	Identify a lead elected member for reducing infant mortality	
5	Modifiable factors associated with infant mortality are firmly embedded in integration programmes	
6	Consider opportunities to influence behaviour change and social norms for modifiable factors associated with infant mortality (such as social movement).	
7	All services commissioned are evaluated to ensure they make positive changes to modifiable factors	
8	Data sharing and information governance within localities facilitates safeguarding for all agencies	Chair of LSCB Director Public Health
9	Effective partnership working including information sharing to support safeguarding.	
10	All staff working with children and families have the capacity and capability to work effectively to ensure safeguarding and understand the implications in relation to infant mortality	
11	Review working practices for professional staff working in deprived areas and ensure rotation to more affluent areas to prevent social norms becoming distorted	
12	Reliable information system to enable access to high quality intelligence to identify 'at risk' population groups	Chair of LSCB Director Public Health
13	Preconception care in place which targets 'at risk' groups of congenital abnormality	
14	Outreach worker in each locality where there is a high rate of congenital abnormality	
15	Engage with community leaders and families in high risk groups to communicate messages about consanguinity and the advantages of genetic screening	
16	Ensure clear and consistent messaging for safe sleeping across all agencies within the locality and include wider services such as 3rd sector, social media, forums (e.g. mumsnet), housing, guest houses etc. using Starting Well National Guidance	Chair of LSCB Director Public Health
17	Smoking cessation targets for midwives and health visitors.	Chair of LSCB Director Public Health
18	Smoking cessation interventions at 20 week scan delivered by trained sonographers (Blackpool model)	
19	Healthy Community Pharmacies provide cessation intervention upon purchase of pregnancy test kit. Opportunities for Public Health interventions.	

Recommendations for individual localities		Proposed lead
20	Improve referral pathways to enable immediate cessation support	
21	Implement evidence based smoking and pregnancy incentive scheme – other 'softer' rewards such as certificates of achievement are extremely valuable / motivational tools.	
22	Services provide an additional 'offer' to families who are most deprived e.g. free vitamins for pregnant mothers, smoking incentive schemes, pathways to employment/education	Chair of LSCB Director Public Health