Coventry, Solihull & Warwickshire Safeguarding Children Boards

CHILD DEATH OVERVIEW PANELS

ANNUAL REPORT

2016 - 2017

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<u>Appendices</u>

1 The focus for 2016-2017 continued very much as it has in previous years by aiming to review cases in a timely manner, involving families in the process, progressing actions arising from reviews and continually reviewing and improving the process as a whole. The learning outlined in this report relates to deaths reviewed between 01 April 2016 and 31 March 2017 and the statistical data relates to deaths notified during this same reporting year.

2 Deaths reviewed by Child Death Overview Panels (CDOPs) during 2016-2017:
17 panels were held across the sub-region during 2016-2017 and **85** deaths were reviewed. Of the **85** deaths reviewed, **31** (36.5%) were identified as being preventable. The definition of 'preventable' is defined in Chapter 5 of Working Together to Safeguard Children (Reviewed 2015) as '***Those in which modifiable factors may have contributed to the death. These are factors defined as those, where, if actions could be taken through national or local interventions, the risk of future child deaths could be reduced"***

2.1 For the first time since the process began, there was one death where there was insufficient information to determine whether there were any modifiable factors. This relates to a death which occurred abroad (paragraph 4.11 refers). The breakdown for each LSCB is detailed in the table below:

LSCB	Panels held	Deaths Reviewed	Modifiable Factors Identified	Insufficient information to determine
Coventry	6	33	11 (33%)	0
Solihull	4	19	06 (32%)	1
Warwickshire	7	33	14 (42%)	0
Total	**17**	**85**	**31 (36%)**	**1**

2.2 Coventry panels consisted of 5 full CDOPs and 1 Fast Track CDOP. Solihull held 4 full CDOPS and Warwickshire held 6 full CDOPs and 1 Fast Tack CDOP.

3 Recommendations and actions arising from Coventry CDOP during 2016-2017

3.1 **<u>26</u>** actions were progressed from deaths reviewed during 2016-2017. The following is a summary of the learning identified and the actions initiated:

3.2 Deaths with modifiable factors and actions identified:

3.3 *Unexpected deaths due to trauma:*
Coventry CDOP reviewed 4 unexpected deaths of infants due to trauma, 2 of which were subject of a Serious Case Review (SCR) conducted by Coventry Safeguarding Children Board. In the first case an infant died after co-sleeping with parents in an adult bed and the investigation that followed identified that the infant had died from asphyxiation due to overlay. The CDOP review identified alcohol, substance misuse, poor parenting and neglect as modifiable factors. CDOP endorsed the learning and recommendations of the SCR and did not identify any additional learning or actions. One of the recommendations from the SCR was to raise awareness of unsafe sleeping and the CDOP Manager provided data to assist with a press release.

3.4 In the second case an infant drowned whilst left unsupervised. The CDOP review identified poor parenting and neglect as causal factors. As in the case above, CDOP endorsed the learning and recommendation of the SCR and did not identify any additional actions.

3.4.1 In both cases a police investigation was conducted but a criminal prosecution was not pursued in either death on the advice of the Crown Prosecution Service.

3.5 In the third case an infant died after being left unsupervised for a short period in an electric swing chair. There was a possibility that the infant had asphyxiated but the investigation that followed could not substantiate this. The infant had been securely fastened in the chair but the CDOP review concluded that parents had not followed the manufacturer's instructions. An action was identified to share this learning with health visitors to advise parents to follow manufacturer's instructions with all equipment.

3.6 In the fourth case an infant died after being fed in bed by a parent who fell asleep unintentionally. In the investigation that followed it was identified that the infant had died from asphyxiation due to becoming entangled in the bed sheets. The infant was born prematurely and the CDOP review identified maternal smoking in pregnancy as contributing to the infant's vulnerability and co-sleeping as a causal factor.

3.7 *Sudden Infant Death Syndrome:*
Coventry CDOP reviewed one death of an infant where death was attributed to Sudden Infant Death Syndrome (SIDS) where a parent had unintentionally fallen asleep on a sofa whilst feeding the child. No additional actions were identified by CDOP. Further sub-regional information on sudden and unexpected deaths reviewed during 2016-2017 is outlined in paragraph 9.

3.8 *Consanguinity:*
Coventry CDOP reviewed 3 deaths where consanguinity was identified as a modifiable factor and where parents were either first or second cousins. In one case, where parents had sadly lost other children to the same condition, an action was identified to ascertain if the parents had received genetic counselling. No additional actions were identified as work is still being conducted by the Diversity and Inequalities Sub-Group of the Health and Wellbeing Board. Please see paragraph 7.1 for more information on consanguinity.

3.9 *Extreme Prematurity, Lifestyle Factors and DNAs:*
Coventry CDOP reviewed 3 neonatal deaths where maternal smoking in pregnancy was identified as a contributory factor. In 2 reviews maternal infection and/or maternal obstetric history were also contributory factors.

3.9.1 In one of the reviews CDOP sought to ascertain what the Trust's policy was when expectant mothers did not attend (DNA) appointments and if patients were followed up. CDOP was informed that there is a robust policy and this patient was followed up when appointments were not attended.

3.9.2 In another review where the infant died from significant respiratory problems, the CDOP review identified that there are other ways of dealing with pulmonary hypoplasia (incomplete development of the lungs). HFOV (high frequency oscillatory ventilation) can be helpful but CDOP was made aware that not all Consultants use it. CDOP concluded it would therefore be useful to have guidelines on dealing with pulmonary hypoplasia to ensure consistency. This has been allocated to one of the neonatal team at the Trust concerned and the action will remain open on the CDOP action plan until completed.

3.10 Learning and actions identified in non-modifiable deaths:

3.11 In the review of a term baby who died as a result of oxygen deprivation to the brain, a Root Cause Analysis (RCA) conducted by the Trust identified a lack of communication between staff and a misinterpretation of the CTG (Cardiotocography, which records the baby's heartbeat) as learning points, although this would not have changed the outcome. CDOP was informed that during the RCA it was discussed that it might be useful to produce a checklist which

indicates when Registrars should escalate situations to the Consultant. CDOP supported this and suggested the checklist be flagged to the Royal College of Obstetrics & Gynaecology (RCOG) as good practice. This has been taken up by the Maternity Risk Manager.

3.12 *Miscellaneous actions in relation to neonatal deaths:*

3.13 In one case when a mother discharged herself against medical advice and where English was not the mother's first language, CDOP wished to ascertain if an interpreter had been used to explain the risks to the mother and also when discussing the baby's prognosis. CDOP was informed that an interpreter had been used and that mother had been made fully aware of the risks.

3.14 In the same neonatal death the health visitor noted concerns with the home conditions whilst conducting an antenatal visit and CDOP wished to ascertain if a referral was made to Children's Social Care. CDOP was informed that the health visitor made an appropriate referral to a local project for support but not to Children's Social Care as the criteria to refer was not met. The CDOP member from Children's Social Care confirmed that had a referral been made, the threshold would not have been met.

3.15 In another review it was ascertained that the Special Care Baby Unit at the Trust concerned did not have a system to share information electronically with the health visiting service. An action was identified to look at developing a system, which is work in progress.

3.16 Where a family had recently moved to the UK from an EU country, CDOP wished to ascertain if an older sibling was known to the health visiting service and that a 'transfer in' visit had taken place. The sibling was known and a 'transfer in' visit had taken place.

3.17 In the same review CDOP noted that the school attended by an older sibling had concerns regarding poor attendance. An action was identified to ascertain with the school what support was provided and if a CAF (Common Assessment Framework) was initiated. CDOP was also informed that the documentation and Badger entry (IT system used by the Trust) was excellent, however the Consultant's letter was not sent to the family GP as the system indicated that the family were not registered with one. An action was identified for the Trust concerned to review its procedures to ensure that staff routinely confirmed GP details with patients when attending appointments.

3.18 Ascertain if bereavement support and genetic counselling had been offered to parents of a neonate who was diagnosed antenatally with a congenital condition.

3.19 Further sub-regional information on neonatal deaths is contained in paragraph 6.

3.20 O*ther Miscellaneous Actions:*

3.21 In the review of an infant who died suddenly and unexpectedly from an unascertained cause, an action was identified to liaise with the family GP as parents had sadly lost a previous child under similar circumstances.

3.22 In the review of a child who died from a life limiting condition, CDOP wished to ascertain that the 'Choose and Book' referral service for the paediatric service was working effectively. It was found to be so.

3.23 Obtain additional information and clarification.

3.24 Provide feedback to parents in cases where parent(s) had provided information to the review.

3.25 *Other:*
CDOP reviewed the death of a fit and well young person who was found unresponsive at home. An investigation concluded that death was from a sudden cardiac arrest and was recorded by the Coroner as 'Sudden Adult Death Syndrome'. No modifiable factors or actions were identified.

4 Recommendations and actions arising from Solihull CDOP during 2016-2017

4.1 ***24*** actions were progressed from deaths reviewed during 2016-2017. The following is a summary of the learning identified and actions initiated:

4.2 Deaths with modifiable factors and actions identified:

4.3 *Sudden and Unexpected Deaths:*
Solihull CDOP reviewed 3 deaths where the cause of death was recorded as Sudden Infant Death Syndrome. In the first case parental smoking, a high room temperature and low birth weight were identified as contributable risk factors. The CDOP review noted that Mother was tested for Group B Streptococcus (a bacterial infection) in pregnancy and tested positive however her results were not checked prior to giving birth, therefore she did not receive antibiotics at the time of delivery in accordance with local guidance. This was flagged to the Trust concerned.

4.3.1 CDOP also queried if room thermometers were still being given to new parents and was informed that they were being given to parents by the midwife when handed their personal child health record (red book).

4.4 In the second case, baby fell asleep in an adult bed propped up onto a pillow. Co-sleeping, maternal smoking and low birth weight were identified as contributable risk factors. In this review CDOP also learned that Mother had a history of alcohol abuse and depression and was referred for support by her GP. At this time Mother was caring for a toddler sibling and CDOP queried why a safeguarding referral had not been made to Children's Social Care by the GP. This was shared with the GP to review their practice. CDOP also ensured that Mother was being given appropriate support following her bereavement.

4.5 In the third case reviewed an unsafe sleeping environment; high room temperature and parental smoking were identified as contributable risk factors. CDOP was made aware that Mother had previously been advised about safe sleeping and ensuring rooms were at the appropriate temperature and that her health visitor had made a referral to Children's Social Care outlining her concerns days prior to the baby's death. CDOP concluded that there were communication issues between agencies and recommended to Solihull Safeguarding Children Board that a learning review takes place.

4.6 In the death of a neonate born at 24 weeks who died from complications associated with their prematurity, CDOP concluded that maternal alcohol abuse pre-conception was a contributory factor in Mother going into premature labour and therefore increasing the child's vulnerability. CDOP was also informed that the health visitor made contact with Mother to arrange the primary visit, unaware that the child was still in hospital. CDOP suggested that the gestational age of premature babies should be contained in the birth notification sent out by Child Health to make health visitors aware of premature babies and therefore likely to be in hospital for some time.

4.7 Extreme Prematurity and Lifestyle Factors:
CDOP reviewed 2 neonatal deaths born at 18 weeks and 27 weeks gestation respectively where maternal smoking in pregnancy contributed to the mothers going into premature labour and thereby increasing the vulnerability of their baby.

4.7.1 In one of the reviews (where the baby was born at 27 weeks gestation) there was a delay in finding a neonatal cot, however CDOP concluded that whilst this contributed to the child's vulnerability it did not contribute to their death.

4.7.2 Further sub-regional information on neonatal deaths reviewed during 2016-2017 is outlined in paragraph 6.

4.8 *Other miscellaneous actions in relation to neonatal deaths:*
Other actions include (i) ensuring bereavement support and (ii) checking on the progress of surviving twins.

4.9 *Learning and actions identified in non-modifiable deaths:*

4.10 *Sudden and Unexpected Death on Public Transport:*
In the review of a young person who collapsed and died from an undiagnosed heart condition on a bus, the joint agency investigation identified that the young person was not found immediately as the bus was not checked on arriving at the bus depot, contravening company procedures. CDOP wrote to the bus company to ask that the procedure of checking buses once back at the depot is reiterated and complied with. The bus company responded to the effect that they had put in place a number of actions to ensure compliance.

4.11 *Sudden and Unexpected Death Abroad:*
A child with a known nut allergy collapsed and died from a suspected anaphylactic shock whilst on holiday in the Far East. CDOP sought to obtain background information from the local (UK) hospital where the child was initially referred for her allergy, but was unable to ellicit any detailed information from the country where the child died in order to identify any modifiable factors.

4.11.1 Historically it has been difficult to obtain information from other countries when children have died abroad, however the CDOP Manager has recently been provided with the contact details of the Foreign and Commonwealth liaison officer for all deaths of British citizens abroad which should improve the quality of information in the future.

4.12 *Sudden and Unexpected Death from an Anaphylactic Shock:*
A young person with a known nut allergy collapsed and died whilst out shopping after eating confectionary containing nuts. CDOP was informed that a sibling was not coping very well and was in need of professional support. The CDOP Chair informed that Solihull commission 'SOLAR', an emotional wellbeing and mental health service for those aged 0-19 years and asked that details of 'SOLAR' be shared with the Solihull Schools Strategic Accountability Board. Further to this, arrangements are in hand for a psychologist from the SOLAR team to come and talk at a Head Teacher's Breakfast Meeting in September 2017.

4.12.1 In the same review CDOP noted that a paramedic attempted to intubate the young person but did not have the EtCO2 equipment in the ambulance to check if the tube was in the right position so removed the tube. CDOP wrote to West Midlands Ambulance Service (WMAS) to ask why this equipment was not in the ambulance. WMAS responded to say that this piece of equipment is routinely kept in ambulances but on this occasion there was a fault, which is a rarity. This equipment did not have a detrimental effect on the young person and CDOP accepted the explanation given.

4.13 *Causal Link between Febrile Convulsion and Unascertained Sudden Unexpected Deaths:*
A fit and healthy young child was found unresponsive in bed and despite a full investigation the cause of death could not be ascertained. This young child had presented to hospital as a toddler with a febrile convulsion and the pathologist informed the designated doctor for child deaths that there may be a link, which might be causal, between febrile convulsions and later sudden

and unexpected deaths. Solihull CDOP noted that this was the second death they had reviewed in similar circumstances and the designated doctor contacted the pathologist to ascertain if there is any literature on the connection and if not to discuss if it would be worthwhile to conduct research in this area. CDOP will continue to monitor and identify any future deaths with this link.

4.13.1 Further sub-regional information on sudden and unexpected deaths reviewed during 2016-2017 is outlined in paragraph 9.

4.14 High Carbon Monoxide (CO) Readings at Antenatal Booking:
In the review of a neonate who died from extreme prematurity, CDOP was informed that Mother's carbon monoxide reading, routinely taken at the antenatal booking was recorded as 5. This would indicate that Mother is a smoker as the threshold for referring to smoking cessation is 4, however both parents were non-smokers. CDOP discussed that there may be other reasons why the reading was high, e.g. from appliances within the home, road pollution etc. and in these situations other possibilities should be discussed with expectant Mothers to encourage checks within the home. CDOP ascertained that this advice is being given.

4.14.1 The NHS Trust concerned would also like to introduce a second CO reading further in the pregnancy. The Trust was informed that a number of other Trusts in the sub-region routinely take another reading from expectant mothers at 38 weeks gestation.

4.15 *Other:*
A young person with complex medical conditions and susceptible to recurrent chest infections was found unresponsive at home. A joint agency response' as per the Sudden and Unexpected Death in Infants and Children (SUDIC) Protocol was commenced and the cause of death was ascertained as Bronchopneumonia. Due to the young person's medical history, the Coroner agreed that the GP could issue a death certificate and the joint agency response was halted. No modifiable factors or actions were identified at the CDOP review.

5 Recommendations and actions arising from Warwickshire CDOP during 2016-2017

5.1 **38** actions were progressed from deaths reviewed during 2016-2017. The following is a summary of the learning identified and the actions initiated:

5.2 Deaths with modifiable factors and actions identified:

5.3 *Sudden and Unexpected Death from Sudden Infant Death Syndrome (SIDS):*
Warwickshire CDOP reviewed one death where a parent inadvertently fell asleep whilst feeding their baby in bed, propped up onto a pillow. Co-sleeping in between two adults was identified as a contributable risk factor. A Root Cause Analysis (RCA) was conducted in relation to the maternity care provided to Mother. This related to Mother's discharge from hospital following the birth and monitoring the weight of the baby. The following learning was identified by the RCA which was endorsed by CDOP: (1) It is best practice to review the patient and document the care plan and advice given in the medical records rather than relying on verbal conversations. (2) Any deviations from normal care or specific risk factors that may influence changes to postnatal community care planning must be included in the discharge information for the community midwife. (3) Two health care professionals must confirm the birth weight on the scales and document accordingly. (4) Any weight loss of more than 10% within the first 72 hours of life must be referred to a paediatrician. (v) Community Midwives are to request to view where a will be sleeping on the first postnatal visit and reiterate safe sleeping messages.

5.4 *Sudden and Unexpected Deaths from Road Traffic Collisions:*
CDOP reviewed 2 deaths from road traffic collisions. In one death, a young child who was a rear seat passenger in a vehicle where the driver lost control, was found to be appropriately restrained in a booster seat, however CDOP learned that the type of booster seat used was to

become illegal at the end of 2016. CDOP did not identify any actions as the manufacturers had already modified the product.

5.5 In the second review a child was killed whilst riding their bicycle on a rural road after being hit by a vehicle which was overtaking a long line of traffic at the time. The child had unfortunately drifted on to the wrong side of the road at the point of collision. The child was not wearing a helmet and was unsupervised at the time. CDOP also learned that the child had learning difficulties and also at the time of their death was on the waiting list to receive a block of treatment to work on their co-ordination skills. CDOP concluded that all were contributable factors and identified the following actions: (1) To link in with the Road Safety Team to ascertain what advice is given to raise awareness of rider safety with school age children. It was ascertained that 'BikeRight!'(a cycling development business) deliver all cycle training free to schools, on behalf of Warwickshire County Council and their policy on helmets is that every child taking part in cycle training must wear a helmet to participate. At the first session, children are taught to fit their helmet correctly and parents must also sign a consent form stating they have provided their child with a helmet and a road worthy bike. (2) To raise awareness with all schools via the Local Authority's school message system as many school age children ride bicycles to and from school every day. (3) Learning to be shared with all health professionals, to include Paediatricians, GPs, School Nurses, Physiotherapists, Occupational Health and Child and Adult Mental Health Service (CAMHS) to reinforce that cautionary advice is given to children/young persons, regarding activities and pursuits whilst being investigated for co-ordination problems

5.5.1 The driver was prosecuted but the case was dismissed at Crown Court by the trial judge on the basis that expert opinion concluded that the driver had conducted a safe overtake manoeuvre.

5.6 *Non-accidental Injury:*
CDOP reviewed the death of an infant who died from a head injury whilst in foster care. A foster parent was subsequently prosecuted and received a term of imprisonment for Manslaughter. A Serious Case Review was conducted and the learning and recommendations were endorsed by CDOP. The full Serious Case Review report can be accessed via the following link: http://apps.warwickshire.gov.uk/api/documents/WCCC-850-618

5.7 *Neonatal Deaths Subject of an Internal Review:*
The following deaths were all subject of a Root Cause Analysis (RCA) or a Serious Untoward Incident (SUI) review conducted by the Trusts concerned and where the majority of learning has been identified from. CDOP would like to acknowledge the excellent co-operation it receives from all Trusts in sharing their reports and action plans, which makes the CDOP review more encompassing. There is a theme with some deaths in relation to reduced foetal movements and/or failing to detect a pathological CTG, which records the fetal heartbeat and contractions.

5.8 In the review of a neonate born at term who died from severe Hypoxic Ischaemic Encephalopathy (deprivation of oxygen to the brain), CDOP learned that Mother had made an emergency appointment with her GP with reduced foetal movements and the GP contacted the Maternity Assessment Unit. As only limited information was conveyed, Mother was given a routine appointment instead of being advised to attend straight away. Mother attended later that day and the baby was born by an emergency caesarean section. The RCA that followed concluded that Mother should have contacted the hospital and not the GP and that the GP should have advised Mother to attend hospital immediately. The following actions were identified: 1) To increase the awareness of expectant Mothers on how to report concerns. 2) A newsletter was sent to all local GPs advising them to refer all expectant mothers of 26 weeks gestation and over to the Maternity Assessment Unit if they are reporting reduced foetal movements. CDOP concluded that the learning should be disseminated wider and forwarded a case study to all Warwickshire CCGs to circulate in their newsletter to GPs.

5.9 In the review of another neonate born at term who died from severe Hypoxic Ischaemic Encephalopathy, Mother presented to the hospital with reduced foetal movements since the previous day and the baby was born by an emergency caesarean section. The RCA identified service delivery problems in that the emergency buzzer was not utilised when the baby's slow heart beat was noted on the CTG; medical staff were at a training session at the time some distance away from the Maternity Unit and during the resuscitation, the suction devise attached to the rescusitaire failed as the oxygen cylinders were depleted. The following recommendations were made: 1) Staff members to be reminded of the need to make use of the emergency buzzer when an emergency arises. This also includes emergencies occurring on the Maternity Assessment Unit. 2) Training for Junior Paediatricians should be located nearer to the labour ward to avoid potential delays. 3) The second theatre room to be fully equipped with a main supply of medical air to ensure that during resuscitation, the resuscitaire can be connected to the main supply of medical air; avoiding the risk of cylinder depletion.

5.9.1 Good practice was also identified in that Mum was provided with the leaflet about monitoring the foetal movements during pregnancy and the entire team involved in the incident was given the opportunity to attend a de-brief session led by a clinical psychologist, which the team found very useful.

5.10 In the review of another neonate who died from a Hypoxic Ischaemic brain injury due to intra-uterine asphyxiation, Mother telephoned her local hospital whilst on holiday, with a history of reduced foetal movements and was advised to attend the local hospital, where the baby was born by an emergency caesarean section. A SUI investigation was conducted by the out of area hospital which identified the following learning: 1) Pulse oximetry (a non- invasive method for monitoring a person's oxygen saturation levels) should be used simultaneously with a CTG which may help to identify the fetal heart from the maternal pulse when there are similarities. 2) Placentas to be sent for histology when a baby is born in poor condition (the placenta was disposed of following the birth). CDOP also identified the following actions: 1) Community Midwives to advise expectant Mothers to find out where the local maternity unit is when going on holiday. 2) To ascertain if Mother had been offered bereavement support.

5.11 In the review of another neonate born at term who died from Hypoxic Ischaemic Encephalopathy, Mother presented at term and baby's heart beat was found to be slow. Arrangements were made for an emergency caesarean section but Mother gave birth naturally. The RCA conducted by the Trust identified that there was a 15 minute delay in the Healthcare Assistant (HCA) escalating their concerns to the triage midwife, however it could not be ascertained with any certainty if earlier detection would have made a difference to the outcome. The following recommendations were made: 1) To explore the skills of HCAs taking observations in triage.2) To ensure the Modified Early Obstetric Warning score (MEOWs) is used by HCAs in maternity triage.

5.11.1 CDOP acknowledged the thorough RCA conducted in this case and fed this back to the Trust concerned.

5.12 In the review of another neonate who died from Severe Hypoxic Ischaemic Encephalopathy**,** initial observations conducted on Mother via a CTG indicated that baby's heart beat was slow. A plan was made to conduct a repeat CTG in a couple of hours but this did not happen until a few hours later and the CTG showed a pathological reading. Baby was born by an emergency caesarean section in a very poor condition. The RCA identified that a failure to follow the medical management plan for a repeat CTG was a contributory factor, although this may not have changed the outcome. The following recommendations were made: 1) SBAR handover sticker (a communication tool designed to improve patient handover using the headings Situation, Background, Assessment and Recommendation) to be reviewed. 2) Documentation audits to take place. 3) Review of transfer process.

5.12.1 CDOP had a number of queries with the RCA and invited the Head of Midwifery to the review who provided explanations to the satisfaction of the panel.

5.13 In the review of another neonate born at term who died from severe perinatal asphyxia and cardiorespiratory failure, Mother had wanted a home birth but was admitted to hospital as she was overdue. On examination the baby's heart beat was found to be slow and an emergency caesarean section was performed. Baby was born in a very poor condition and died shortly after birth. The RCA concluded that: 1) No fundal height measurement was documented by the community midwife after 39 weeks gestation. 2) There was a failure to detect antenatally a small for gestational age or growth restricted baby.3) There was inconsistent practice around the management of the latent phase of labour, with differences between the home environment and the hospital setting.

5.14 In the review of a neonate born at term who died from a massive pulmonary haemorrhage and severe encephalopathy (damage to the brain) at 6 days of age, Mother presented with rupture of membranes and reduced fetal movements. Labour was induced and the baby was born by caesarean section 77 hours after the rupture of membranes. The RCA identified that: 1) Maternal and fetal tachycardia and a maternal raised temperature in the presence of prolonged rupture of membranes should have led to consideration of maternal infection and fetal compromise and antibiotics should have been given sooner. 2) There was a delay in escalating concerns to the consultant. 3) There was a delay in expediting the delivery in the presence of an abnormal CTG and maternal sepsis. The following recommendations were identified: 1) Raise awareness of presentation and diagnosis of chorioamnionitis and maternal sepsis. 2) Ensure obstetric trainees are aware of need to escalate concerns to the labour ward consultant. 3) Ensure that the escalation policy for managing multiple obstetric emergencies on the labour ward is followed. Notable practice was also identified as follows: 1) There was good continuity of midwifery care in the antenatal period.2) There was clear documentation of Consultant led neonatal care. 3) An interpreter was used as appropriate whilst the baby was receiving neonatal care. 4) The labour ward co-ordinator made arrangements for the third theatre to be opened to enable the caesarean section to go ahead. 4) A Paediatric Surgeon from an out of area Trust attended the Root Cause Analysis review.

5.15 *Extreme Prematurity and Maternal Lifestyle Factors:*
CDOP reviewed 3 neonatal deaths where maternal smoking in pregnancy was identified as a contributory and modifiable factor. No actions were identified.

5.16 Learning and actions identified in non-modifiable deaths:

5.17 *Planned Palliative Care for Neonates with Known Lethal Abnormalities:*
CDOP reviewed the death of a neonate who was diagnosed antenatally with medical conditions incompatible with life and planned palliative care was agreed following the birth. CDOP was informed that as the parents had not been given the full facts, their hopes were raised and they opted for their baby to be born at a level 3 neonatal unit, where the baby died shortly after birth. CDOP concluded that it would have been more appropriate for Mother to have given birth at a local hospital with palliative care provided on a ward rather than in an intensive care environment and that a care pathway needed to be developed for neonates with known lethal abnormalities. This was raised at the Coventry and Warwickshire Perinatal Network and all areas agreed to conduct awareness training with staff.

5.18 In the review of a neonate subject of a Child Protection Plan who died from complications of a congenital diaphragmatic hernia diagnosed antenatally, the GP was unaware of a domestic abuse incident between the parents and appeared to have an inaccurate understanding of the family situation. CDOP was aware that a lot of work had been done with GPs in raising awareness around domestic abuse but shared the learning with the relevant CCG to ask if more

work needed to be done around raising awareness with GPs. Feedback was also provided to the GP concerned.

5.19 In the review of a twin born prematurely at home, CDOP noted that the paramedic was giving Mother uterine massage whilst en route to hospital. Maternity advice was that this should not be given if the placenta is still in situ as it can lead to the inversion of the uterus and maternal shock. This was fed back to the ambulance service and disseminated to staff. CDOP also noted good communications between the paramedics and the receiving hospital to determine where Mother and baby would be received and this was fed back to both organisations.

5.20 In the review of a neonate who died from complications of prematurity, Mother informed that she had given up smoking at 6 weeks gestation. CDOP wished to ascertain with Public Health if smoking cessation services are offered to expectant mothers who have recently stopped smoking to give them the support to continue. Public Health confirmed that they do provide this service and encouraged them to be referred. Additional sub-regional information on neonatal deaths reviewed during 2016-2017 is outlined in paragraph 6.

5.21 In the review of a 5 month old who collapsed at home and sadly died from a known cardiac condition, CDOP noted that the attending paramedic did not have a blood pressure cuff small enough to use on the infant. This was fed back to the ambulance service which responded that they do supply paediatric blood pressure cuffs however it would not have been small enough for a 5 month old. The training and education they provide to staff is that pre-hospital blood pressures are unreliable due to requiring exactly the correct size cuff, changing the settings on the automated machines and movement and distress of the child. It is also recognised that a change in blood pressure is a pre terminal sign and therefore other physiological changes should be noted and acted on such as mental state, respiratory and heart rate and appearance of the child.

5.22 Miscellaneous actions identified in non-modifiable deaths:

5.23 In the review of a young person who died after running across a pelican crossing into the path of a vehicle, the panel requested further information from the police in relation to the sequence of events and if the pelican crossing had been utilised at the time.

5.24 To provide feedback to parents when they contributed information to their child's review and/or asked any specific questions.

5.25 To ensure families are receiving appropriate support.

5.26 To check on the welfare of siblings via their school.

5.27 To feed back when good practice has been identified at the review, to individuals or organisations, as below:

5.27.1 Excellent support provided by schools to parents/siblings.

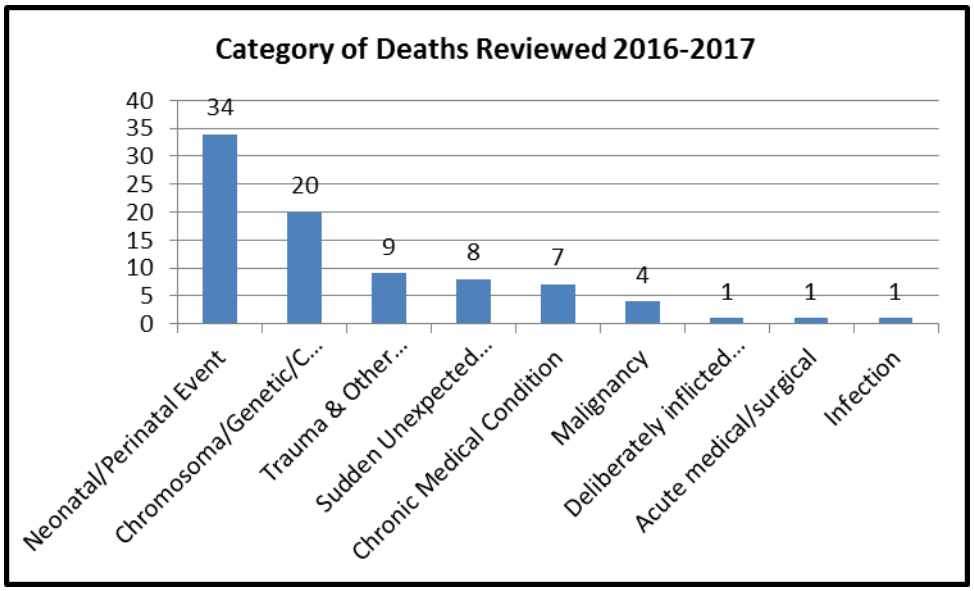
5.27.2 Excellent care provided by an out of area hospital and good communication with the local hospital to ensure appropriate support was given to parents.

5.27.3 Prompt referral made by a GP in the case of a child subsequently diagnosed with cancer, which enabled a prompt investigation and diagnosis.

5.27.4 Excellent actions and a detailed report provided to CDOP by a Police Support Investigator following a sudden and unexpected death.

5.28 The Educations Safeguarding Manager wrote to all school in Warwickshire to raise the awareness of the child death review process and the importance of providing school information in relation to the deceased child and any siblings.

Generic themes identified in the categories of deaths reviewed across the sub-region during 2016-2017:
The following chart shows the categories concluded at the CDOP review using the national template on the Form C Analysis Pro-forma as shown in Appendix 'F'.



6 Neonatal deaths:

As in previous years, neonatal deaths were the highest category of deaths reviewed during 2016-2017 across the sub-region, accounting for **40%** (**34 out of 85**) of the total reviewed. Of the **34** deaths reviewed during 2016-2017, modifiable factors were identified in **47%** (**16 out of 34**).

6.1 Of the **16** neonatal deaths reviewed where modifiable factors were identified, maternal lifestyle factors were contributory in **9** cases **(8** smoking in pregnancy and **1** alcohol and substance misuse). In **3** of the modifiable deaths maternal infection due to chorioamnionitis (an infection of the membranes and amniotic fluid) was a contributory factor. In the other **7** deaths, modifiable factors were identified in service provision, as outlined in paragraphs 5.8, 5.9, 5.10, 5.11, 5.12, 5.13 and 5.14, which predominantly came from hospital Trusts internal reviews.

6.2 The learning reflects the findings of the previous four reporting years where the majority of modifiable factors in neonatal deaths are due to lifestyle factors. When lifestyle factors are contributory, CDOPs will look at whether appropriate referrals were made to smoking cessation, healthy eating programmes or the substance abuse midwife.

6.3 There has been recent discussion at CDOPs whether to record Mothers as smoking in pregnancy when they state they have given up once they know they are pregnant. CPOP concluded that the most accurate way of determining this is to request the carbon monoxide (CO) reading taken at the first antenatal appointment when the pregnancy is booked. Heart of England NHS Trust routinely includes the CO reading when providing antenatal information for Solihull mothers and the antenatal template has been amended for Coventry and Warwickshire Trusts to do the same.

6.4 It is also appropriate to mention again that CDOPs acknowledge the continued co-operation of all Trusts, regionally and wider, for providing CDOPs with their RCA/SUI reports and action plans so that all learning can be captured and disseminated appropriately.

6.5 Finally on this category, whilst neonatal deaths are consistently the highest category of death reviewed (and in most areas the highest number of deaths reported per year) it must also be acknowledged that Coventry, Warwickshire and Birmingham Heartlands Hospital (where some Solihull babies are born) each deliver over 6,000 babies per year which gives some perspective when compared to the number of deaths.

7 Chromosomal, Genetic and Congenital Anomalies:

20 deaths across the sub-region reviewed during 2016-2017 were classified under this category. Modifiable factors were identified in **1** death due to consanguinity (paragraph 3.8 refers). The remaining **19** were congenital defects diagnosed during the antenatal period or shortly after birth, with death occurring within the neonatal period or within the first year of life. In these deaths no modifiable factors were identified but actions arose from some of the reviews as outlined in paragraphs 3.14, 3.18, 5.17, 5.18, 5.21, 5.24, 5.25, and 5.26.

7.1 Consanguinity

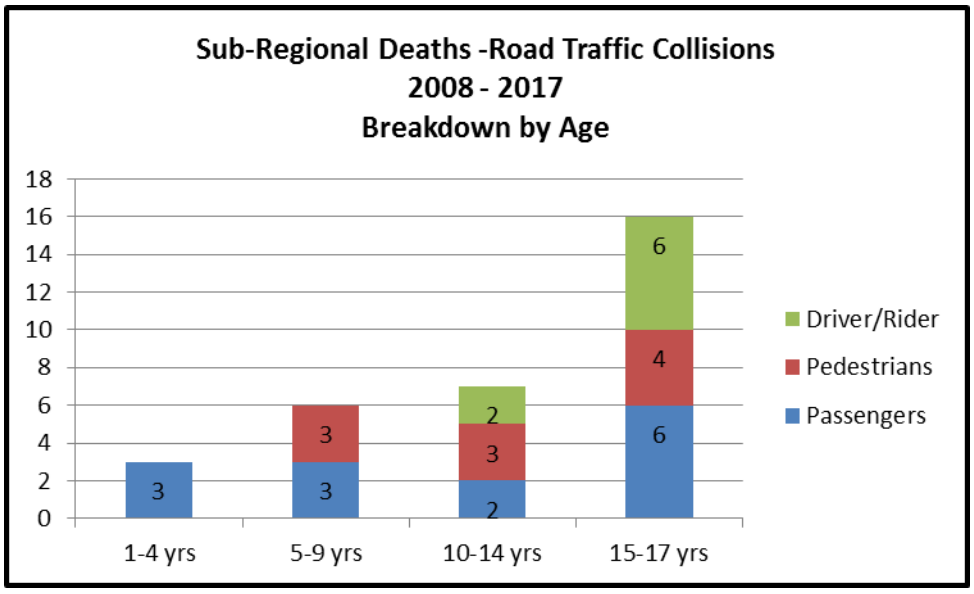
Since the start of the process in April 2008 there have been **26** deaths reviewed where parents are consanguineous (i.e. blood related and usually first or second cousins) with 50% of Pakistani origin. Coventry CDOP has reviewed **21** and Warwickshire CDOP has reviewed **5**. Of the **26** reviews, **17** (65%) were identified as being modifiable due to consanguinity (**13** in Coventry and **4** in Warwickshire). During 2015-2016 Coventry Public Health conducted an epidemiology study which was presented to Coventry Safeguarding Children Board in January 2016, where a recommendation was made for this to be taken forward by the Coventry Health and Wellbeing Board. This work is still ongoing.

8 Trauma and other external factors:

9 deaths were reviewed across the sub-region during 2016-2017. **3** were as a result of road traffic collisions as outlined in paragraphs 5.4, 5.5, and 5.23. The remainder are outlined in paragraphs 3.3, 3.4, 3.5, 3.6, 4.11, and 4.12. Modifiable factors were identified in 4 deaths, as outlined in paragraphs 3.3, 3.4, 3.5, 3.6.

8.1 D*eaths from Road Traffic Collisions:*

32 deaths have resulted from road traffic collisions since the start of the process from 01.04.08 to 31.03.17. **29** have been reviewed to date and it is anticipated that the remaining 3 will be reviewed during 2017-2018. In terms of where the collisions took place, there are no geographical 'hotspots' identified. The following graph gives a breakdown of the ages and whether a driver, passenger, or pedestrian.



8.1.2 As can be seen, 50 % (**16** out of **32)** were in the 15-17 year age group. In relation to the **6** drivers/riders**, 5** were inexperienced drivers who had recently passed their driving test and sadly lost their lives through driver error. All **6** passengers died as a result of driver error. In relation to the pedestrians in this age group, all **4** had placed themselves in danger by walking out in front of traffic and/or wearing dark clothing on an unlit road. Consumption of alcohol and cannabis featured in **3** of the deaths in this age group in both drivers and pedestrians.

9 Sudden, Unexpected and Unexplained Deaths:

8 deaths were classified under this category in the reviews conducted during 2016-2017. **5** were deaths which fitted the criteria of 'Sudden Infant Death Syndrome' and all were modifiable deaths as outlined in paragraphs 3.7, 4.3, 4.4, 4.5, and 5.3. The remaining 3 were unascertained deaths despite a full investigation, as outlined in paragraphs 3.21, 3.25 and 4.13.

9.1 *Joint Agency Response into Sudden and Unexpected Deaths and Other Investigations:*
The following information relates to deaths which were sudden, unexpected and unexplained at the time of death, which fit the criteria for a joint agency response (also known as a 'Rapid Response' investigation) as per the Sudden and Unexpected Deaths in Infants and Children (SUDIC) Protocol. The elements of a joint agency response are outlined in Appendix 'D'.

9.1.1 It is important to point out that the deaths referred to below transcend all of the final categories, i.e. the death may have been sudden, unexpected and unexplained at the time of death but at the CDOP review the cause of death will be classified under the relevant category, as per the national template outlined in Appendix 'F, which is why there are more deaths outlined below than there are in paragraph 9 which solely relates to deaths which remained unexplained or unascertained following an investigation, i.e. under Category 10 .

9.2 *Coventry*
Coventry CDOP reviewed **8** sudden and unexpected deaths during 2016-2017. **4** deaths were due to trauma, (2 of which had been placed in an unsafe sleeping environment); **2** were from a medical cause, **1** was attributed to Sudden Infant Death Syndrome and **1** was an unascertained death. A joint agency response took place in all 8 deaths. Modifiable factors were identified in **5** deaths, as outlined in paragraphs 3.3, 3.4, 3.5, 3.6, and 3.7.

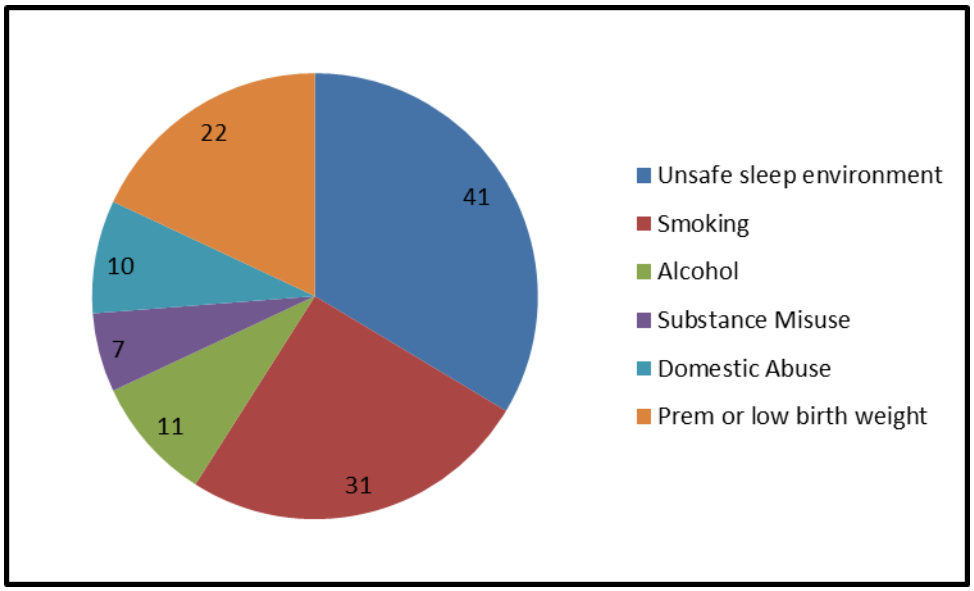
9.3 *Solihull:*
Solihull CDOP also reviewed **8** sudden, unexpected and unexplained deaths during 2016-2017. **3** deaths were attributed to Sudden Infant Death Syndrome, **2** were due to trauma, **2** from a medical cause and **1** was an unascertained death. With the exception of one death which occurred abroad (paragraph 4.11 refers), a joint agency response took place in all of the other sudden and unexpected deaths. Modifiable factors were identified in **3** deaths as outlined in paragraphs 4.3, 4.4 and 4.5.

9.3.1 The CDOP Manager assisted with an audit into Solihull sudden and unexpected deaths occurring between 01.09.15 and 31.03.17 to look at compliance with the SUDIC Protocol and the audit evidenced that the process is working well in Solihull.

9.4 *Warwickshire:*
Warwickshire CDOP reviewed **4** sudden and unexpected deaths during 2016-2017. **1** from a deliberate injury which was a police led criminal investigation, **2** from a medical cause and **1** attributed to Sudden Infant Death Syndrome. In the latter 3 deaths, a joint agency response was conducted in 2 of the deaths. In the third, a joint agency response did not take place as the child died in hospital, however a Coroner's investigation took place and the paediatrician caring for the child prior to death offered to meet with the parents. Modifiable factors were identified in **3** deaths, as outlined in paragraphs 5.3, 5.5, and 5.6.

9.5 *Sudden Infant Death Syndrome (SIDS):*
It is worthy to include a paragraph on SIDS as this category of death has been a main theme since the process began and where most learning and outputs has been achieved. **5** deaths reviewed during 2016-2017 were attributed to SIDS with modifiable factors identified in all, as outlined in paragraphs 3.7, 4.3, 4.4, 4.5 and 5.3. In all **5** deaths, an unsafe sleeping environment was identified as a contributory risk factor (co-sleeping was a feature in **3)** and in **3** of the deaths maternal and/or parental smoking was also a contributory risk factor. It should also be noted that **2** of the deaths classified under Trauma featured an unsafe sleeping environment as a contributory risk factor due to co-sleeping with adults and the reason for classifying them as deaths from Trauma is that the medical evidence was able to determine asphyxiation as a cause of death, as outlined in paragraphs 3.3 and 3.6.

9.5.1 *Risk Factors Identified in SIDS Deaths Reviewed Between 2008- 2017:*



9.5.2 Since April 2008 there has been a total of **41** deaths reviewed which have been attributed to SIDS and a further **4** infants that have died from asphyxiation due to being in an unsafe sleeping environment at the time of their death. Of the **45** total, **41, (91%)** were sleeping in an unsafe sleeping environment at the time of their death. **27** were co-sleeping with one or more adults at the time and the remainder were a combination of side or prone sleeping, propped on a pillow and/or in a hot room. Parental smoking was identified as a risk factor in **31** deaths (**20** who were co-sleeping with their child at the time and the other **11** sleeping in the same room as their child). The above chart shows the other known risk factors which were present at the time of death.

9.5.3 A lot of work has been done over the years to promote safe sleeping practices. A preventative campaign was launched across the sub-region in 2010 where all new parents were provided with a 'goody' bag containing merchandise with safe sleeping messages. An audit of the campaign identified that parents most valued the room thermometer and to this day health professionals across the sub-region are still giving parents the thermometer. Several awareness/training days have been organised with contributions from the Lullaby Trust and Media/Poster campaigns have also been launched with data provided by the CDOP Manager to reinforce campaigns and initiatives. In 2016 the SIDS risk assessment tool became part of the Personal Child Health Record (red book) which health professionals are completing at the primary visit and monitoring at subsequent visits if needed. This is in addition to specific actions identified at CDOP reviews to remind midwives and health visitors to physically check where the baby is sleeping and to discuss intentional and unintentional sleeping with parents, particularly at feeding times.

9.5.4 The information overleaf only relates to the deaths that have been reviewed at CDOP so far. Other deaths have occurred during 2016-2017 which indicate characteristics of SIDS but they are still being investigated.

9.6 *Sudden and Unexpected Death in Infants and Children (SUDIC) Protocol:*

9.6.1 Warwickshire revised its protocol in January 2016 and it is published on the Warwickshire Safeguarding Children Board website.

9.6.2 The national SUDIC guidance produced by a working group consisting of members from the Royal College of Paediatrics and Child Health and Royal College of Pathologists, the Chief Coroner and chaired by Baroness Kennedy, was published in November 2016. The term 'rapid response' as we know it has been replaced by the term 'joint agency response', which will no doubt be the term used in future protocols and hence used in this report.

9.6.3 There have been further developments to revise the West Midlands SUDIC policy. The Birmingham Senior Coroner has taken the lead on this and has set up a working group to progress this. Assurances have been given that this will be a Pan West Midlands Protocol and the West Midlands CDOP/SUDIC Network will be utilised to share the draft for consultation. The three LSCB Business Managers intend to invite the Birmingham Coroner to a future LSCB Business Manager's meeting to ensure that there is a link with LSCBs as they ultimately have responsibility to ensure that appropriate arrangements are in place to investigate sudden and unexpected deaths.

10 Chronic Medical Condition:

7 deaths were reviewed during 2016-2017 which fell in this category and all died from their chronic condition or a medical cause associated with it. **2** were considered to be modifiable due to consanguinity as outlined in paragraph 3.8 but no actions were identified from the reviews as work is ongoing. In the remaining **5** non modifiable deaths, actions (unrelated to the death) were identified in 4, as referred to in paragraphs 3.17, 3.22, 3.23, and 5.27.4.

11 Malignancy:

4 deaths were reviewed during 2016-2017, none of which had modifiable factors identified. In all 4 deaths prompt referrals were made and some good practice was identified as outlined in paragraphs 5.27.1 and 5.27.3. Other generic actions resulted from reviews as outlined in paragraphs 3.22 and 5.28

12 Acute medical or surgical condition:

1 death was reviewed during 2016-2017 and no modifiable factors or actions were identified.

13 Infection:

1 death was reviewed during 2016-2017 and no modifiable factors or actions were identified.

14 Deliberately Inflicted Injury:

1 death was reviewed which was subject of a Serious Case Review, as outlined in paragraph 5.6.

15 Suicide or deliberate self-inflicted harm:

There were no deaths reviewed under the category during 2016-2017 and there are no reviews pending which indicate suicide or deliberate self-inflicted harm.

16 Serious Case Reviews:

1 death was reviewed which was subject of a Serious Case Review, as outlined in paragraph 5.6. There are however 2 deaths subject of ongoing Serious Case Reviews, one from

year 2015-2016 and the other from 2016-2017, which should be completed and reviewed at CDOP within the next reporting year.

17 Additional information on the deaths reviewed where modifiable factors were identified:
The following information relates to the **31** modifiable deaths reviewed during 2016-2017 in relation to age, gender, ethnicity, category of death and place where events leading to death occurred.

17.1 Age:
16 were aged between 0-27 days, **11** were aged between 28-364 days and the remaining **4** were spread across the older age groups. This mirrors the findings of deaths reviewed over the last three reporting years where the 0-27 day age group is the highest, accounting for 52 % of the total of modifiable deaths.

17.2 Gender:
20 were male and **11** were female, which again is consistent with findings over previous years.

17.3 Ethnicity:
22 were White British, **3** were of Pakistani origin, **3** from a mixed ethnicity and **3** from other ethnicities, which again mirrors the ratio in the last three reporting years. With regards to the cause of death in children of minority ethnic origin, Consanguinity was identified as a modifiable factor in the **3** deaths where the children were of Pakistani origin. In relation to the other deaths there was nothing to indicate that the cause of death or the modifiable factors identified were linked in any way to their ethnicity.

17.4 Category of death:
16 died as a result of a 'Perinatal/Neonatal Event', **6** from 'Trauma and Other External Factors', **5** were 'Sudden Unexpected, Unexplained Deaths', **2** were from a 'Chronic Medical Condition'. The remaining 2 were as a result of a deliberately inflicted injury and from a chromosomal anomaly. Perinatal/ Neonatal deaths have consistently been the highest category.

*17.5 P**lace of event which led to the child's death:***
19 were in hospital at the time of death, either in the Neonatal Unit, Paediatric Intensive Care Unit, Paediatric Ward or Delivery Suite. **10** deaths occurred at the home address and **2** in a public place. In the **19** deaths in hospital, service provision was a modifiable factor in **7.** The modifiable factors in the remainder relate to lifestyle choices, i.e. maternal smoking during pregnancy, alcohol/substance misuse and consanguinity.

17.6 Child Protection Plans / Statutory Orders:
1 child was subject of a Child Protection Plan and **1** child was subject of a Statutory Order at the time of their death.

18 West Midlands Regional CDOP/SUDC Network:
This network attended by CDOP Co-ordinators/Managers, CDOP Chairs and health professionals involved in sudden and unexpected deaths has moved on apace in the last year and has met 6 times since it was re-established in January 2016. Membership has been reviewed and there is now a good cross section which includes representation from two bereavement charities, a hospice and a Coroner's Officer. A new chair has been appointed, Dr Helen Grindulis, Designated Doctor for Unexpected Deaths for Sandwell and the CDOP Manager continues to act as Vice Chair. A number of work streams are being progressed and the network plans to hold a learning event in early 2018 if funding can be secured from NHS England.

19 National learning from deaths reviewed during 2016-2017:
The following has been extracted from the Statistical Release 2016-2017 report produced by the Department for Education in relation to deaths reviewed during this reporting year.

19.1 3,575 child death reviews were completed by CDOPs in the year ending 31 March 2017 which is a reduction from the 3,665 deaths reviewed during 2015-2016. Modifiable factors were identified in 27% of deaths which is an increase from the 24% identified in the previous year.

19.2 76% of deaths were reviewed within 12 months of the child's death which is an increase from 70% in 2015-2016. This is in keeping with our findings as 78% of deaths across the sub-region were reviewed within 12 months. In fact 47% of deaths were reviewed within 6 months or under which demonstrates a robust system.

19.3. National findings also mirror our sub-regional findings in that; most reviews relate to a 'Perinatal / Neonatal Event'; 64% were aged under 12 months; just over half (56%) of deaths reviewed were male and two-thirds were from a White background.

19.4 64 children (2%) were subject of a statutory order at the time of their death, with modifiable factors identified in 45%.

19.5 3% of the deaths reviewed were subject of a Serious Case Review, with modifiable factors identified in 63%.

20 Processes:

20.1 *Involving families in the child death review process*
In the **81** deaths notified in 2016-2017, **47** leaflets were handed to the family by a professional known to the child/family or involved with their child's death and **34** were posted by the CDOP Manager, as a professional was no longer involved with the family**. 7** parents responded to the CDOP Manager (2 Coventry, 2 Solihull and 3 Warwickshire). 2 parents wanted further information about the process; however the other 5 parents wished to highlight concerns in relation to their child's care.

20.2 T*emplate letters:*
Template letters have been developed for Health Visitors to highlight the specific information required for the review. This is in addition to the templates already used for GPs, Schools, Maternity, Police and Social Care information, which has improved the quality of information received.

20.3 The carbon monoxide reading taken at the first antenatal appointment to indicate if mothers are smokers is now routinely included in the antenatal information provided.

20.4 Maternity and *Neonatology input at Warwickshire CDOP:*
The clinical lead for Neonatology and a Maternity representative from University Hospitals Coventry and Warwickshire (UHCW) are routinely invited to attend Warwickshire CDOP when reviewing Warwickshire neonates that died at UHCW.

20.5 *CDOP Membership:*
There have not been any changes to CDOP membership throughout this reporting year and the ongoing commitment and contribution of members is commended.

20.6 *Changes in Ministerial Responsibility:*
NHS England held 2 identical stakeholder events in January 2016, which both the CDOP Manager and CDOP Officer attended. It is anticipated that draft guidance will be circulated

for consultation in the autumn of 2017. Work to develop the national child death database is ongoing.

21 CDOP Working Group

The CDOP Working Group, comprising of the 3 LSCB Business Mangers, the CDOP Manager and CDOP Officer to review the operational elements of the child death review process met once during 2016-2017.

22 Other work:

22.1 The CDOP Manager's role as Vice Chair of the West Midlands CDOP/SUDIC Network does create a lot of additional work as the CDOP Manager produces the meeting minutes, maintains the action plan and facilitates the sharing of good practice amongst the members. The CDOP Manger was also responsible for creating a contact list for Birmingham Children's Hospital of all health professionals involved in sudden and unexpected deaths across the pan- West Midlands area to facilitate a smooth handover of the joint agency response when children from outside the area die at Birmingham Children's Hospital.

22.2 10 requests for CDOP information have been received during 2016-2017, a summary of which is provided as follows:

22.3 Coventry and Rugby CCG requested data on all unexpected deaths requiring a 'joint agency response' from April 2014 to date, broken down into the 3 CCG areas and to include whether they were during normal working hours or outside. The reason for the request is that South Warwickshire CCG has asked Coventry and Rugby CCG to consider having a paediatric rota and they wished to ascertain the likely numbers this would involve.

22.4 The number of SUDICs for each quarter is provided to DCI Harding, Warwickshire and West Mercia Police who holds the child death portfolio for his force and is the Midlands Regional Representative for the National Child Death Sub Group.

22.5 To cross check neonatal deaths at UHCW with the CDOP database to ensure an accurate update is given by the hospital to MBRACE UK (Mothers and Babies: Reducing Risk through Audits and Confidential Enquiries).

22.6 SIDS data was provided to Coventry LSCB to support a media campaign and to the Professional Lead for Health Visiting, Warwickshire, to assist with training.

23 CDOP Budget Expenditure 2016-2017:

Salaries: CDOP Manager and CDOP Officer.		£62,667
Travel		£660
Office costs (stationary, photocopying, phones, IT charges.)		£1,209
Central establishment charges		£15,832
Budget from Warwickshire	£42, 568	
Contribution from Solihull	£13, 000	
Contribution from Coventry	£24 800	
Total Income	**£80 368**	
Total expenditure		**£80,368**

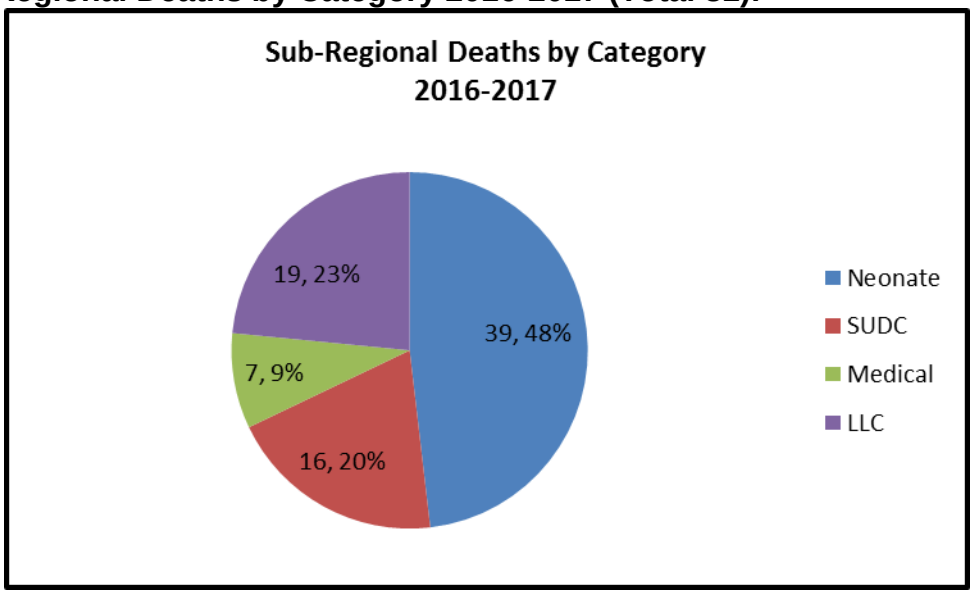
24 Sub-Regional Data on Child Deaths Notified in 2016 – 2017:

24.1 **81** deaths were notified across the sub-region in 2016-2017, (Coventry =**31**, Solihull = **15** and Warwickshire **= 35)** a slight reduction from 2015-2016, where **85** deaths were notified. The reduction has been seen by Solihull, whereas Coventry and Warwickshire deaths have remained static with the same number reported as the previous year. Appendix 'E' gives a breakdown of deaths reported year on year under each category.

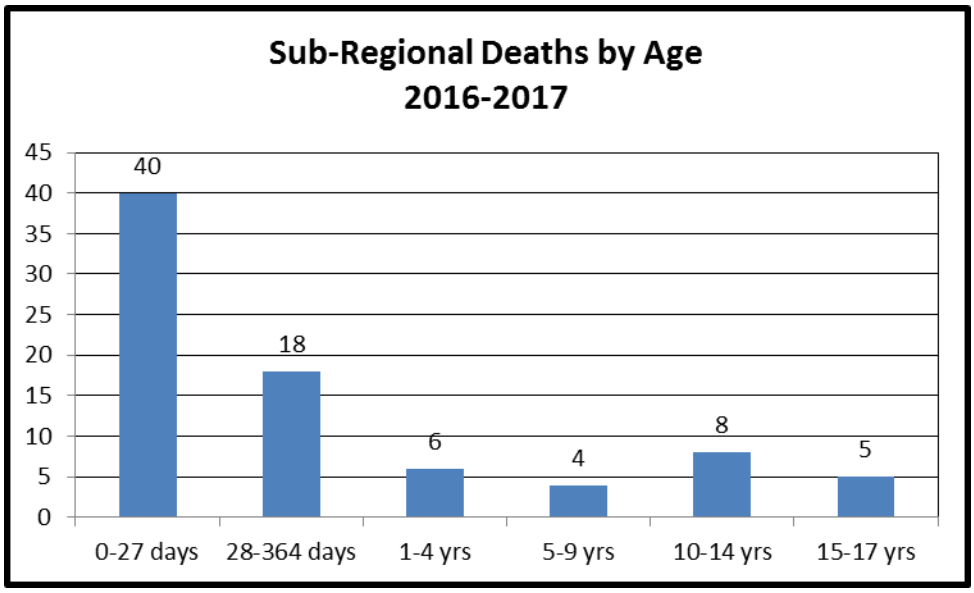
25 Sub-Regional Deaths by Category 2016-2017 (Total 81)

Definitions of the categories used are as follows:
Neonate (NN): 0-27 days of age very often born prematurely and in the vast majority of cases have never left hospital.
SUDIC – Sudden and Unexpected Death where the cause of death is not known and where a joint agency response under the Sudden and Unexpected Deaths in Children (SUDIC) Protocol has been conducted or a police investigation conducted on behalf of the Coroner.
Medical - An unexpected death but where the cause of death is known and a death certificate is issued, e.g. epilepsy, asthma, infection.
LLC – expected death from a life limiting condition where the cause of death is known and a death certificate is issued.

25.1 Sub-Regional Deaths by Category 2016-2017 (Total 81):

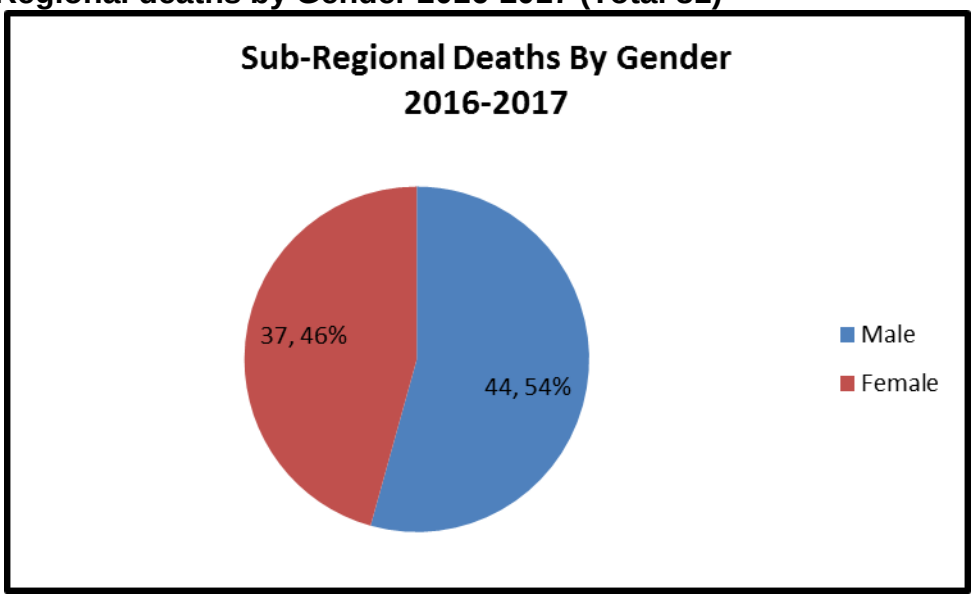


25.2 Sub-Regional Deaths by Age 2016-2017 (Total 81)



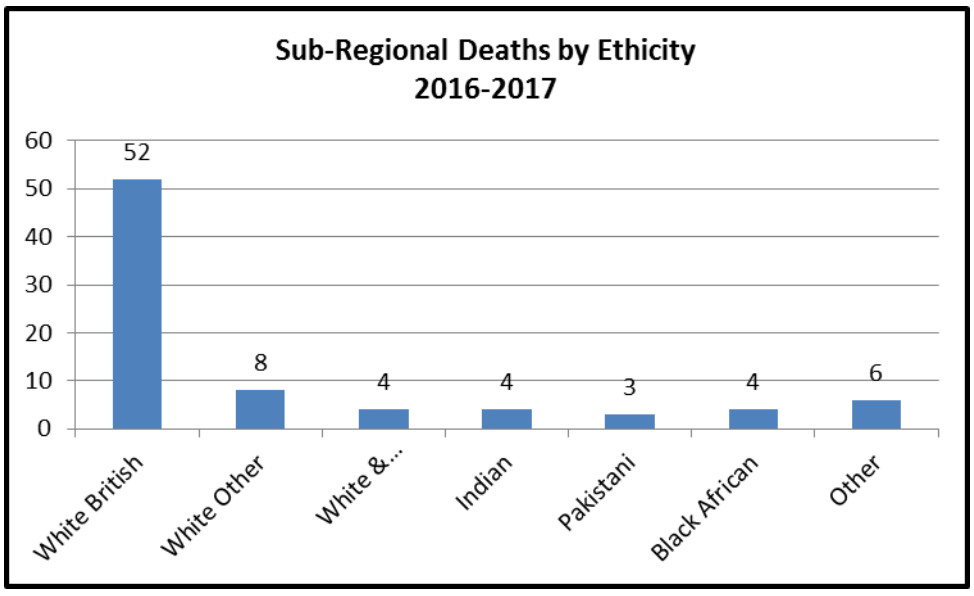
25.3 Deaths in the 0-27 day age group are the highest age group as expected, followed by the 28-364 day category which equates to 72% of deaths within the first year of life. This is consistent with previous years and mirrors the national picture based on the reviews conducted in 2016-2017. 47% of modifiable factors (16 out of 34) were identified in the 0-27 day age group as outlined in paragraph 6.

25.4 Sub-Regional deaths by Gender 2016-2017 (Total 81)



25.4.1 More male than female deaths is consistent with previous years and also mirrors the national findings based on the number of reviews in 2016-2017, however Coventry data bucks this trend as outlined in paragraph 4.6 in Appendix 'A'.

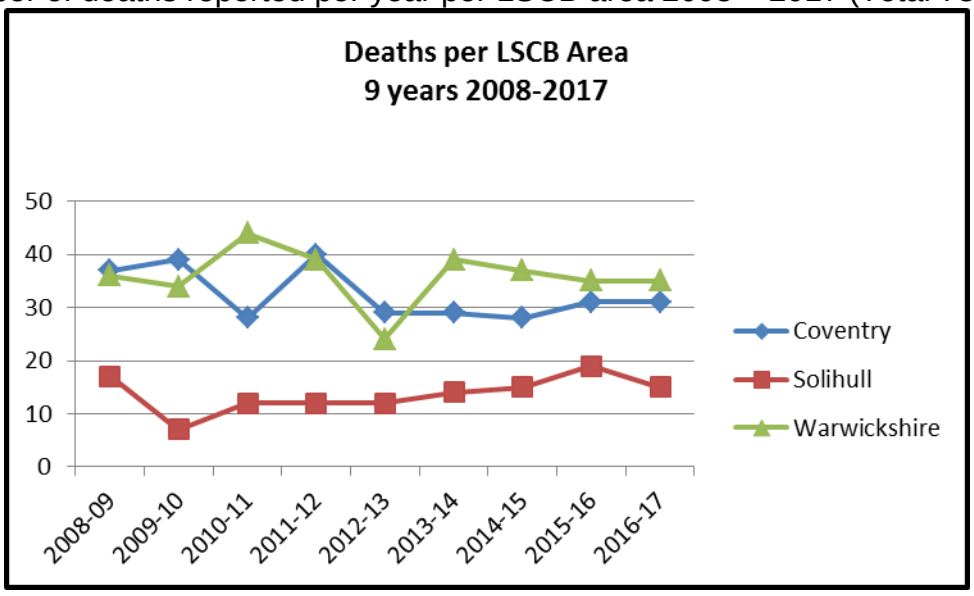
25.5 Sub-Regional Deaths by Ethnicity 2016-2017 (Total 81)



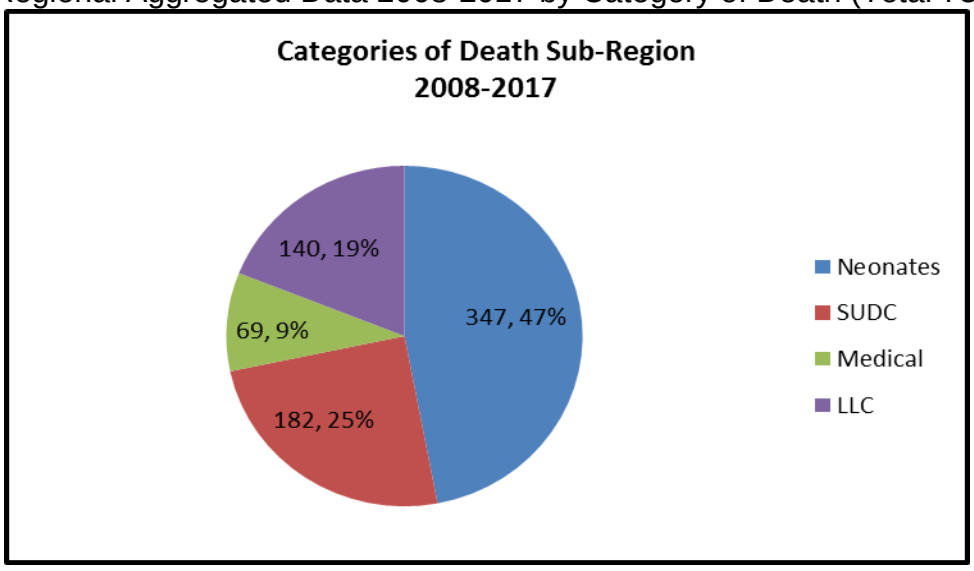
25.5.1 **64%** of all deaths were from a White British background. The vast majority of 'White Other' are from EU countries (7 out of the 8). Categories that have a total of 2 or less have been merged in accordance with disclosure control guidance issued by the NHS Information Centre for Health and Social Care.

26 Sub-Regional Aggregated Data 2008 – 2017 (9 years - total 738)

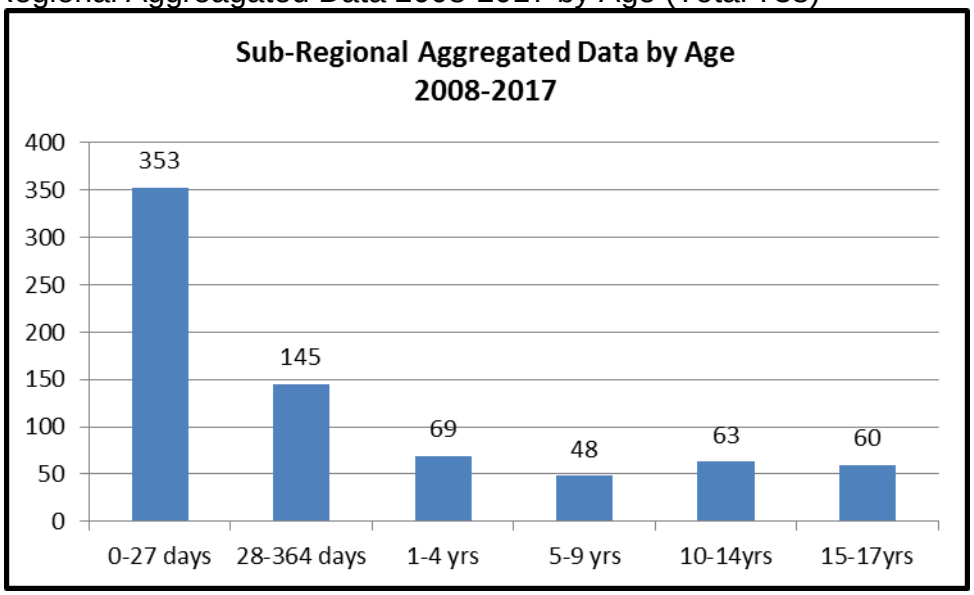
26.1 Number of deaths reported per year per LSCB area 2008 – 2017 (Total 738)



26.2 Sub-Regional Aggregated Data 2008-2017 by Category of Death (Total 738)

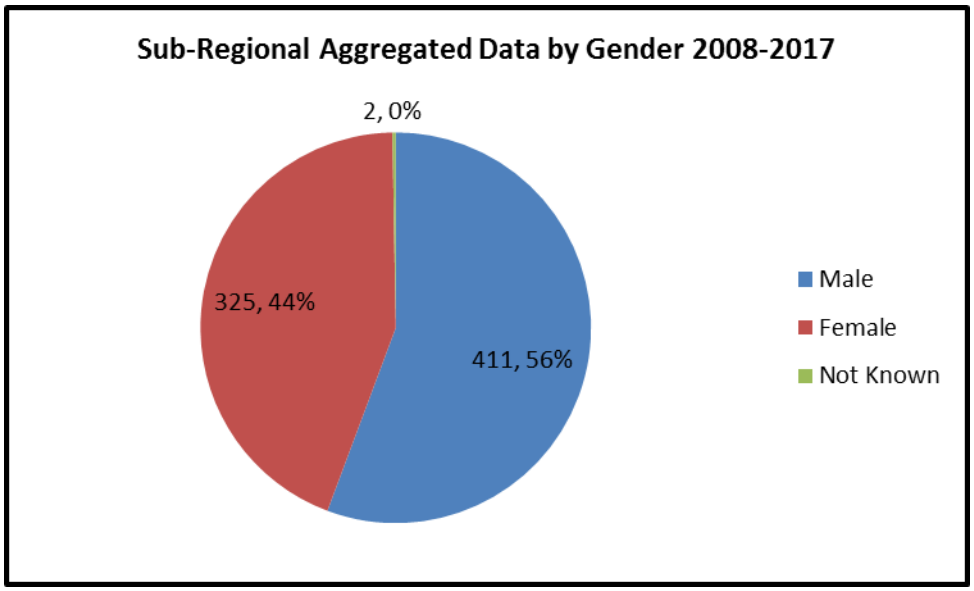


26.3 Sub-Regional Aggreagated Data 2008-2017 by Age (Total 738)



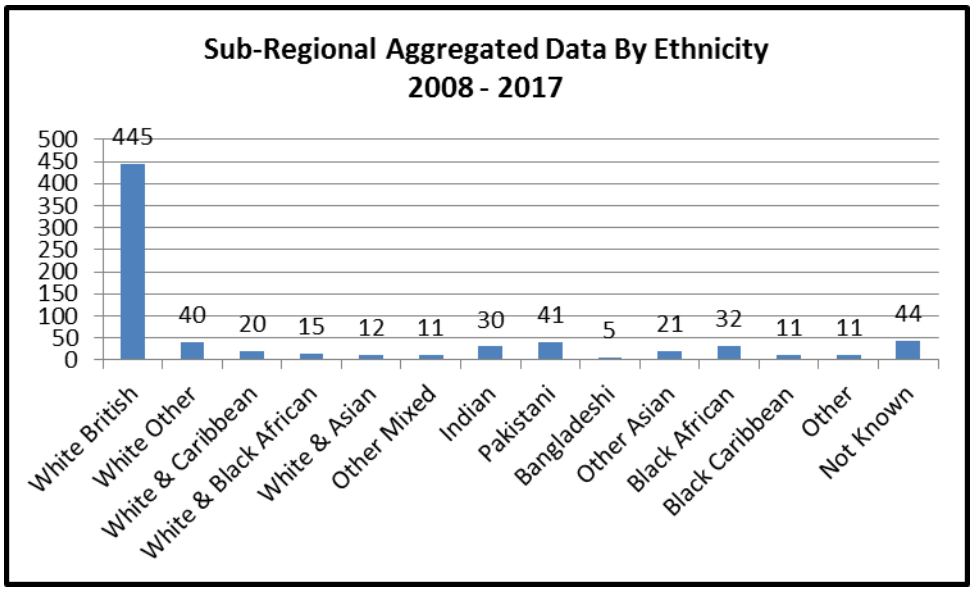
26.3.1 **67%** of children died within their first year of life (498 out of 738).

26.4 Sub-Regional Aggregated Data by Gender 2008-2017 (Total 738)



26.4.1 The 2 unknown are extremely premature babies where gender could not be ascertained.

26.5 Sub-Regional Aggregated Data by Ethnicity 2008-2017 (Total 738)



26.5.1 The 'Not Known' are deaths from 2008-2009 and a few from 2009-2010 when ethnicity was not requested on the national template forms. This changed in early 2009-2010 and ethnicity has been captured since.

26.5.2 With the exception of consanguinity as outlined in paragraph 7.1 the ethnicity of children from a black or minority ethnic group had no bearing on the cause of their death.

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Appendix 'A'

Coventry Child Death Overview Panel

1 Overview:

Coventry's child population (0-19 years) is estimated to be 87,800, 27% of Coventry's total population of 329,800. (Source: Coventry Children's Demographic Profile 2015).

1.1 The health and wellbeing of children in Coventry is mixed compared with the England average. Infant and child mortality rates are similar to the England average. The level of child poverty is worse than the England average with 23.5% of children aged under 16 years living in poverty. The rate of family homelessness is worse than the England average. (Source: Child Health Profile March 2016 published by Public Health England)

1.2 Coventry infant mortality rate (i.e. children under 1 year of age) is 4.0 per 1,000 live births. The infant mortality rate for the West Midlands region is 5.7 and for England, 3.9 (Source: Child Health Profile March 2017 for the period 2013-2015, published by Public Health England)

1.3 Coventry child mortality rate (i.e. children aged 1-17 years) is 16.2 per 100,000 children. The rate for the West Midlands area is 13.0 and for England, 11.9. (Source: Child Health Profile March 2017 for the period 2013-2015, published by Public Health England)

2. CDOP Members during 2016-2017:

Jane Moor, Director of Coventry Public Health (Chair)
Dr James Burden, CCG, NHS England (Vice Chair)
Moira Bishop, Named Nurse for Child Protection, Coventry and Warwickshire Partnership Trust
Lesley Cleaver, Support Nurse for Vulnerable Families
Detective Inspector Jo Floyd, West Midlands Police
Sandra Kerr, Service Manager, Children's Social Care
Nichola Lamb, Safeguarding Support Midwife, UHCW
Amanda Reynolds, Manager, Early Years
Dr Brian Shields, Consultant Paediatrician (Acute Services) UHCW
Hardeep Walker, SCR Coordinator, LSCB

2.1 Co-opted Members:

Dr Kate Blake, Consultant Neonatologist, UHCW
West Midlands Ambulance Service

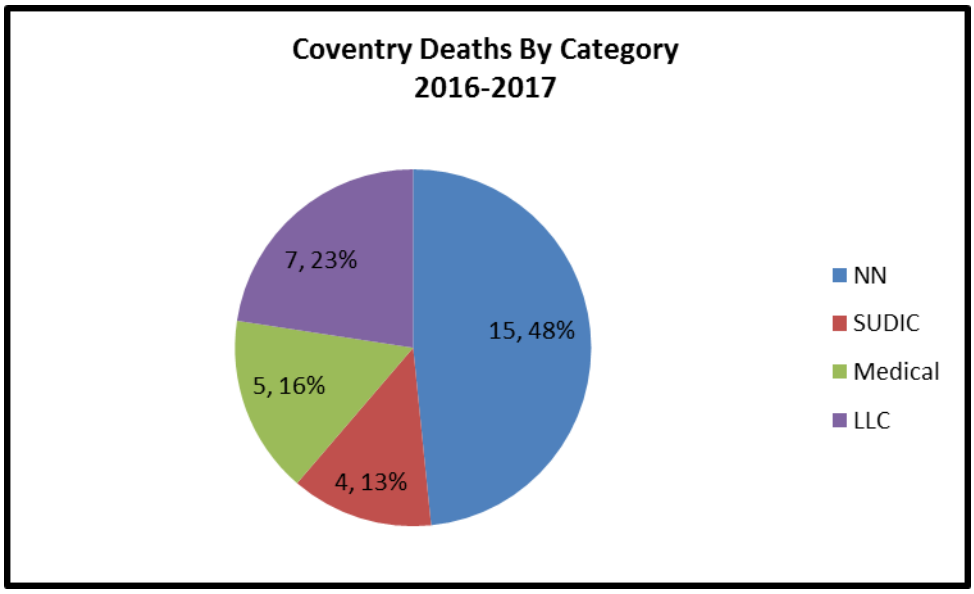
3 Details of the number of CDOPs held and the number of deaths reviewed is outlined in paragraph 2 of the annual report. A summary of the recommendations and actions arising from Coventry CDOP are outlined in paragraph 3.

4 Coventry Child Death Data:

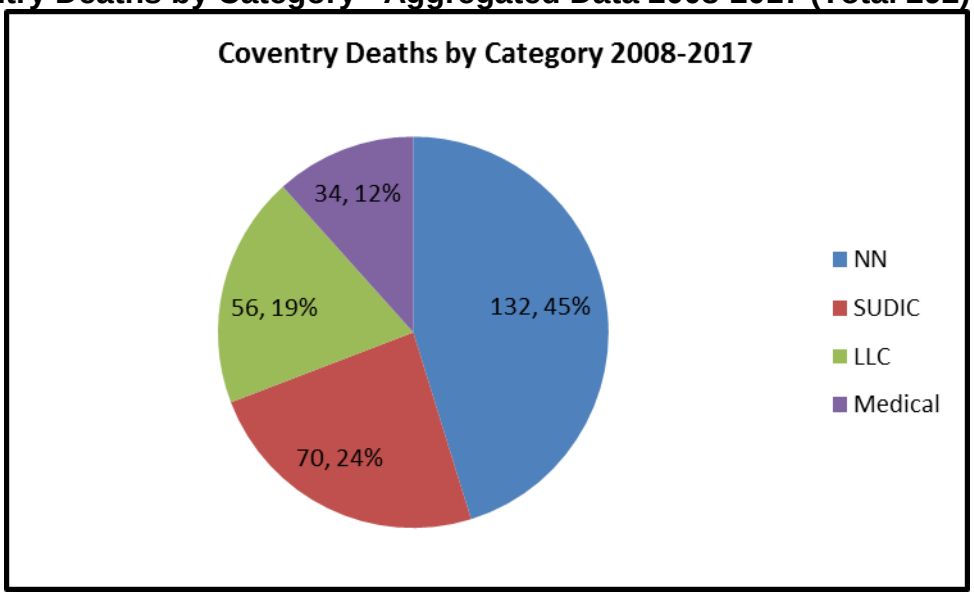
31 deaths were notified in 2016-2017, the same number as the previous year. Year on year numbers are shown in paragraph 26.1 and in Appendix 'E'.

4.1 Explanations of the abbreviations and categories are outlined in paragraph 25. Categories that have a total of 2 or less have been merged in accordance with disclosure control guidance issued by the NHS Information Centre for Health and Social Care.

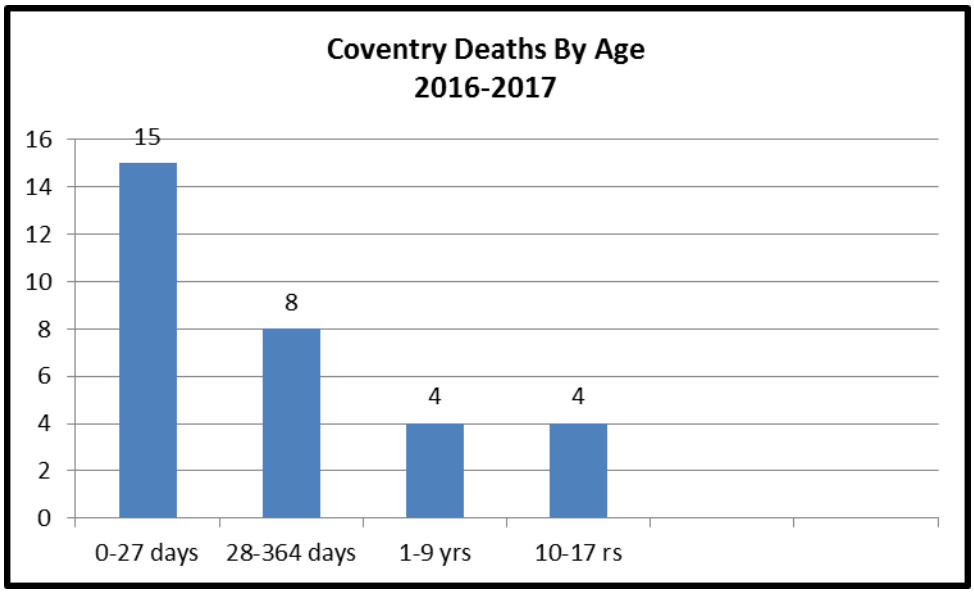
4.2 Coventry Deaths by Category 2016-2017 (Total 31)



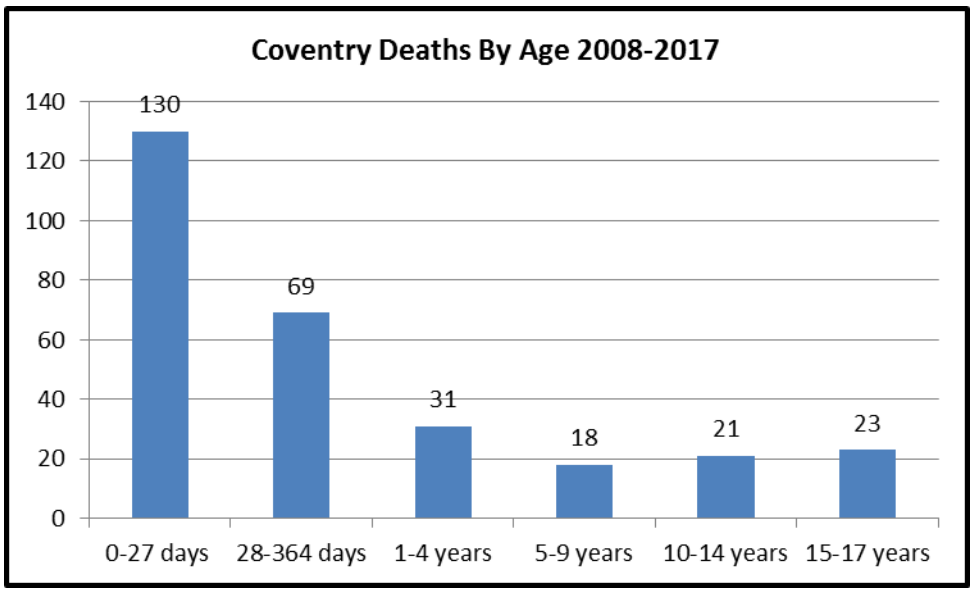
4.3 Coventry Deaths by Category– Aggregated Data 2008-2017 (Total 292)



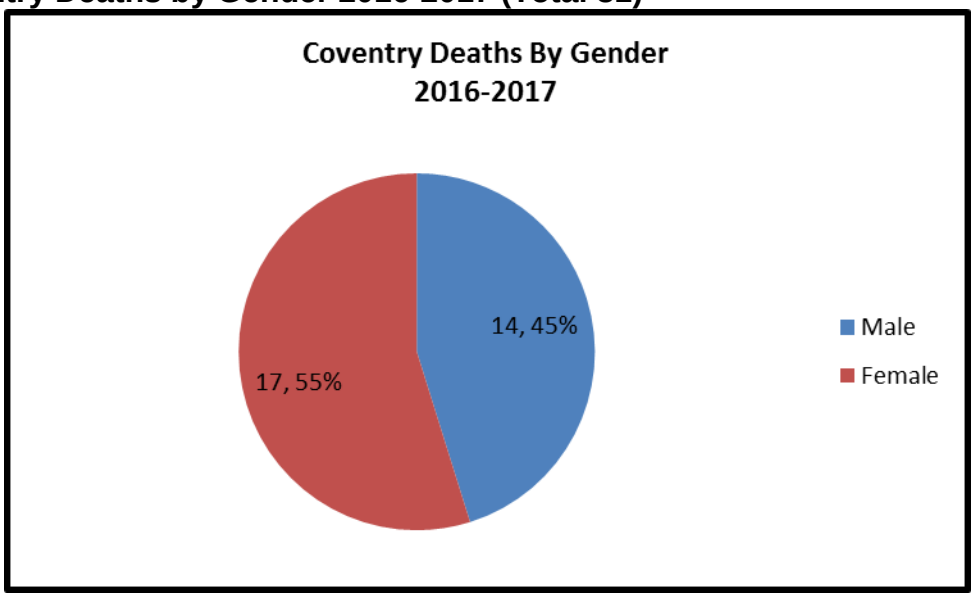
4.4 Coventry Deaths by Age 2016-2017 (Total 31)



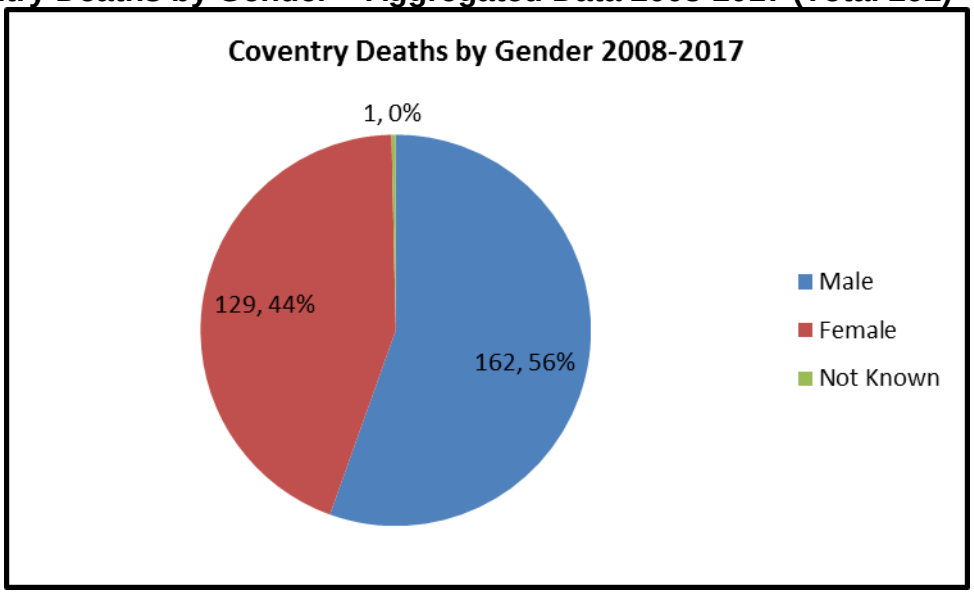
4.5 Coventry Deaths by Age - Aggregated Data 2008-2017 (Total 292)



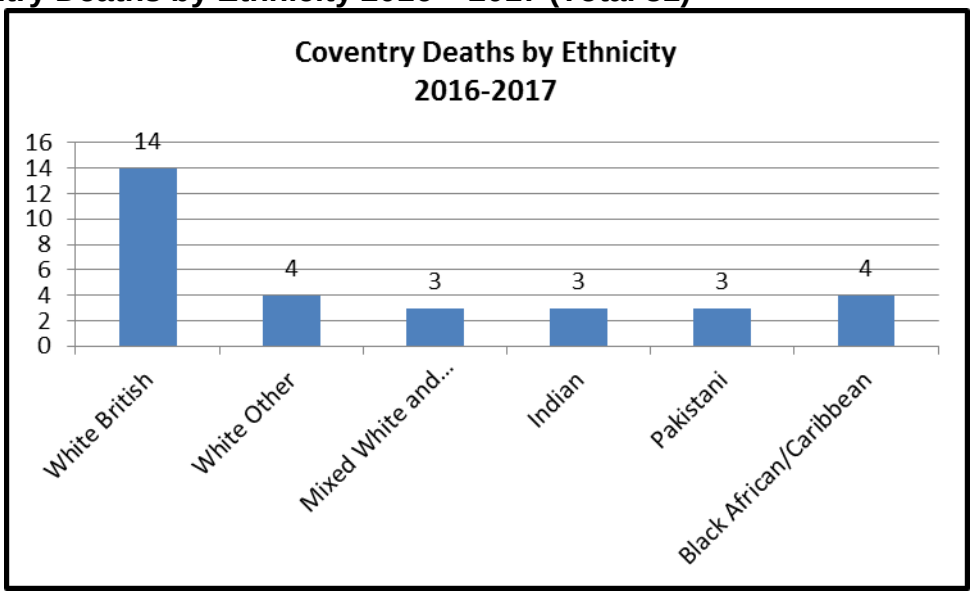
4.6 Coventry Deaths by Gender 2016-2017 (Total 31)



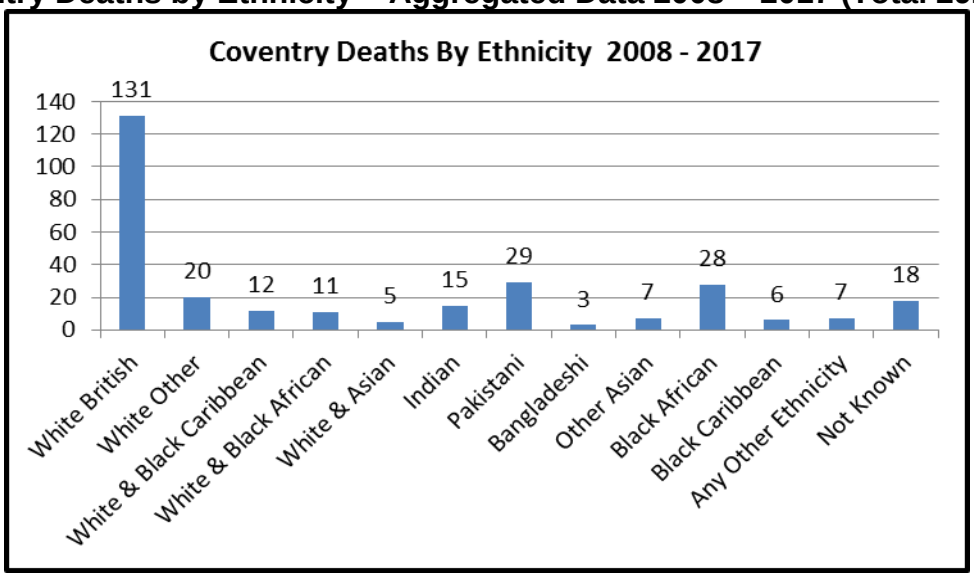
4.7 Coventry Deaths by Gender – Aggregated Data 2008-2017 (Total 292)



4.8 Coventry Deaths by Ethnicity 2016 – 2017 (Total 31)



4.9 Coventry Deaths by Ethnicity – Aggregated Data 2008 – 2017 (Total 292)



5 Summary:

5.1 Neonatal deaths have consistently been the highest category of death since the process began in 2008. Likewise the 0-27 day age group remains the highest age group in both yearly and aggregated data and as in previous years the majority of deaths occurred within the first year of life **199** out of **292** (68%). These findings also mirror national findings and that of Solihull and Warwickshire.

5.2 With regards to gender, the yearly data bucks the trend with more female deaths than male, however the aggregated data shows more male deaths than females which mirrors the national findings and that of Solihull and Warwickshire.

5.3 With regards to ethnicity, children of White British origin remain the single highest category both in the yearly and aggregated data, accounting for 45% of the total. With the exception of consanguinity as detailed in paragraph 7.1, ethnicity had no bearing on deaths from black and minority ethnic groups.

5.4 The 'Not Knowns' are deaths from 2008-2009 and a few from 2009-2010 when ethnicity was not requested on the national template forms. This changed in early 2009-2010 and ethnicity has been captured since.

Appendix 'B'

Solihull Child Death Overview Panel

1 Overview

1.1 The Office for National Statistics (ONS) estimates that in 2015 Solihull's resident population was 210,445 with children and young people aged 0-19 years making up 24.0% (50,200) of the total population. (Source: Solihull Observatory).

1.2 21.7% of school children are from a minority ethnic group. The health and wellbeing of children in Solihull is generally similar to the England average and the infant and child mortality rates are similar to the England average. The level of child poverty is better than the England average with 16.0% of children aged under 16 years living in poverty. The rate of family homelessness is worse than the England average. (Source: Child Health Profile June 2015 published by Public Health England)

1.3 Solihull infant mortality rate (i.e. children under 1 year of age) is 4.7 per 1,000 live births. The infant mortality rate for the West Midlands region is 5.7 and for England, 3.9. (Source: Child Health Profile March 2017 for the period 2013-2015, published by Public Health England)

1.4 Solihull child mortality rate (i.e. children aged 1-17 years) is 15.4 per 100,000 children. The rate for the West Midlands region is 13.0 and for England, 11.9. (Source: Child Health Profile March 2017 for the period 2013-2015, published by Public Health England)

2 CDOP Members during 2016-2017:

Ian Mather, Consultant in Public Health (Chair)
Jane Davenport, Head Teacher
Alison Frost, Team Leader, Solihull MBC Legal Services
Carol Owen, Named Midwife for Safeguarding Children, Birmingham Heartlands Hospital
Detective Inspector Jo Floyd, Police Public Protection Unit, West Midlands Police
Dr Alan Stanton, Consultant Paediatrician (Community)
Anna Stephens, Independent Reviewing Officer and Local Authority Designated Officer (LADO)

2.1 Co-opted members:

Dr Richard Mupanemunda, Consultant Neonatologist, Birmingham Heartlands Hospital.
West Midlands Ambulance Service

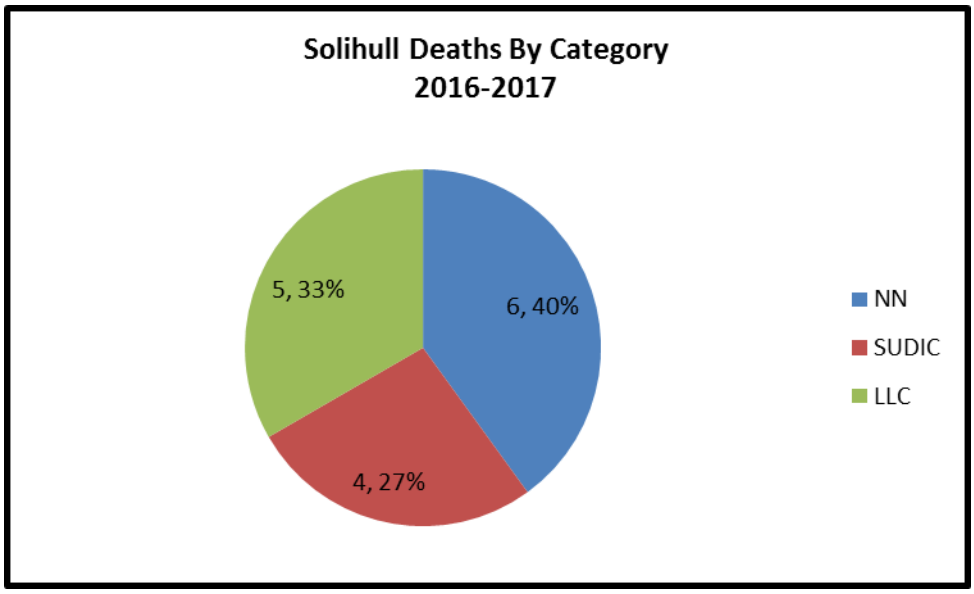
3 Details of the number of CDOPs held and the number of deaths reviewed is outlined in in paragraph 2 of the annual report. To date it has not been necessary to convene a Fast Track CDOP but this will be considered if the numbers demand. A summary of the recommendations and actions arising from Solihull CDOP are outlined in paragraph 4.

4 Solihull Child Death Data

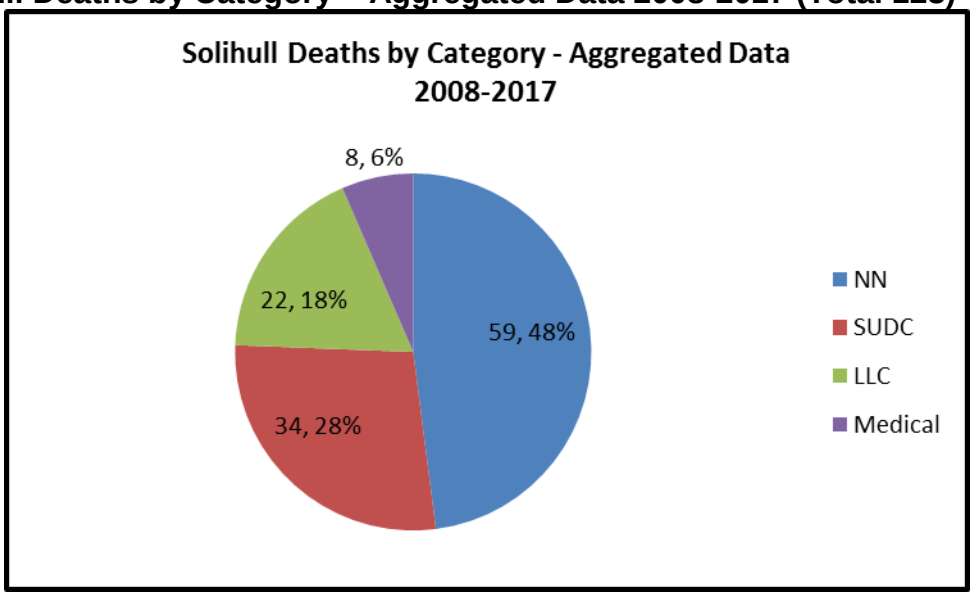
15 deaths were notified in 2016 -2017, a reduction of 4 from the previous year. The reduction has been seen in sudden and unexpected deaths. Deaths reported year on year since the process began in 2008 are shown in paragraph 26.1 and in Appendix 'E'.

4.1 Explanations of the abbreviations and categories are outlined in paragraph 25. Categories that have a total of 2 or less have been merged in accordance with disclosure control guidance issued by the NHS Information Centre for Health and Social Care.

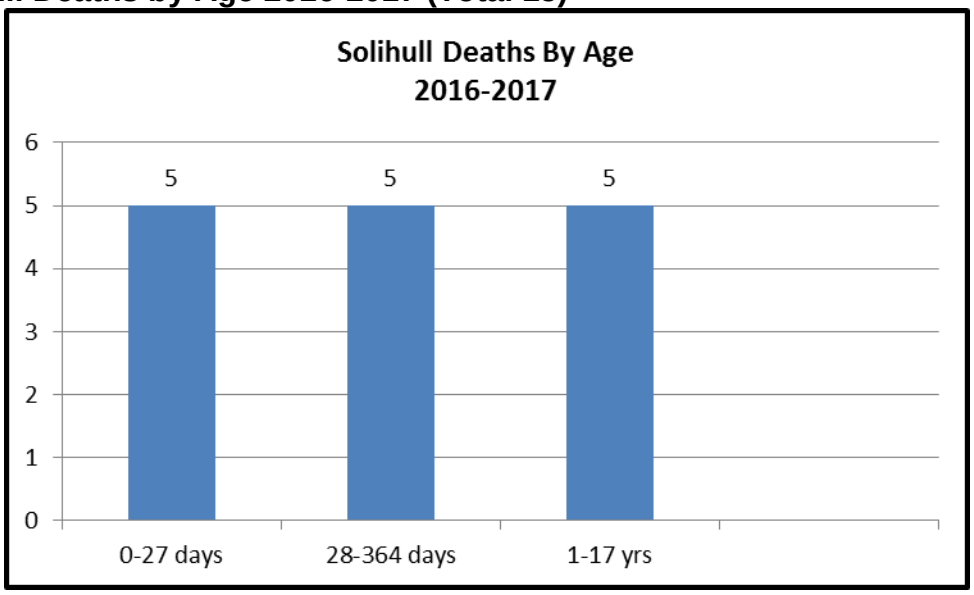
4.2 Solihull Deaths by Category 2016-2017 (Total 15)



4.3 Solihull Deaths by Category – Aggregated Data 2008-2017 (Total 123)

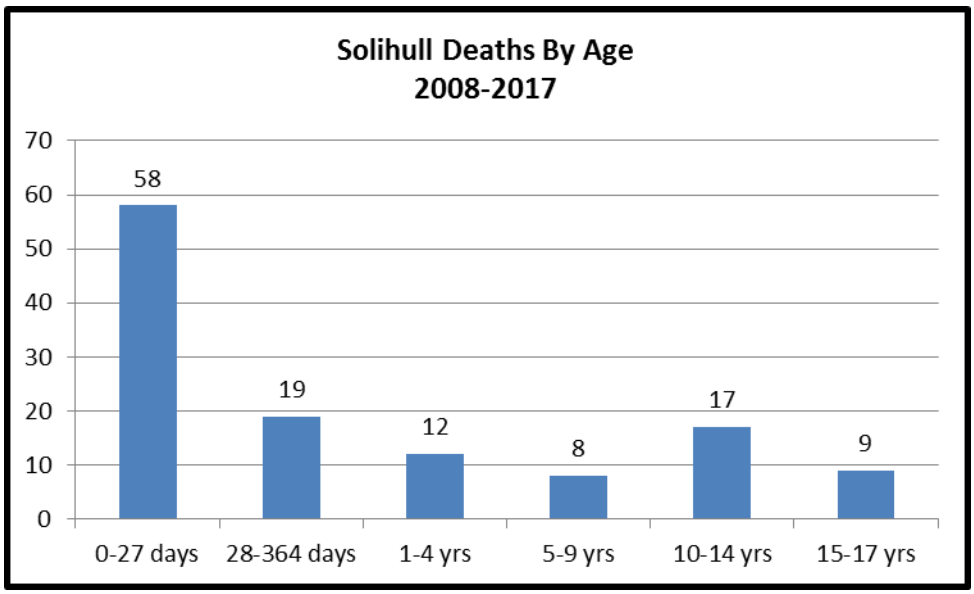


4.4 Solihull Deaths by Age 2016-2017 (Total 15)

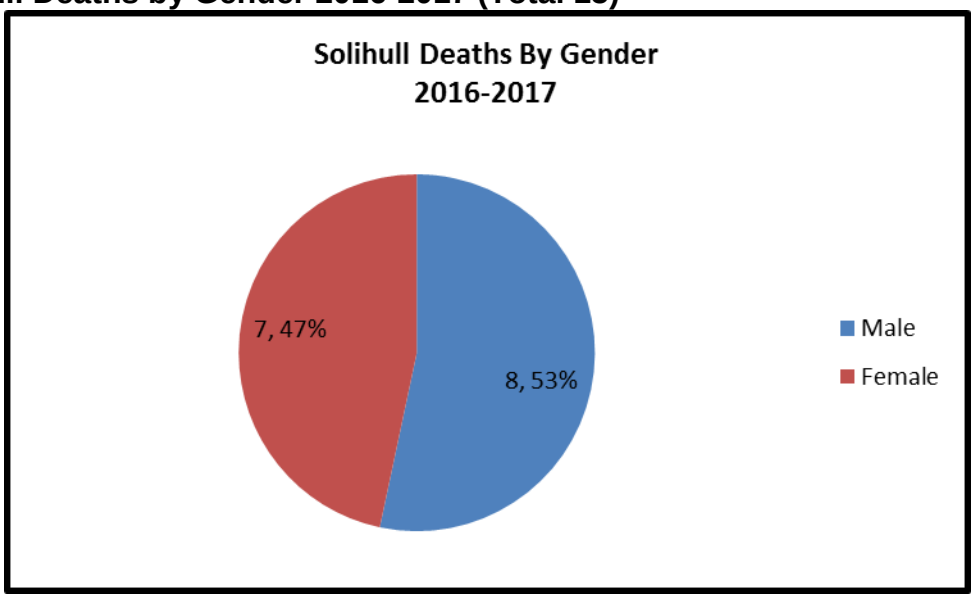


4.4.1 Age groups 1-4, 5-9, 10-14 and 15-17 years have been merged due to the low numbers.

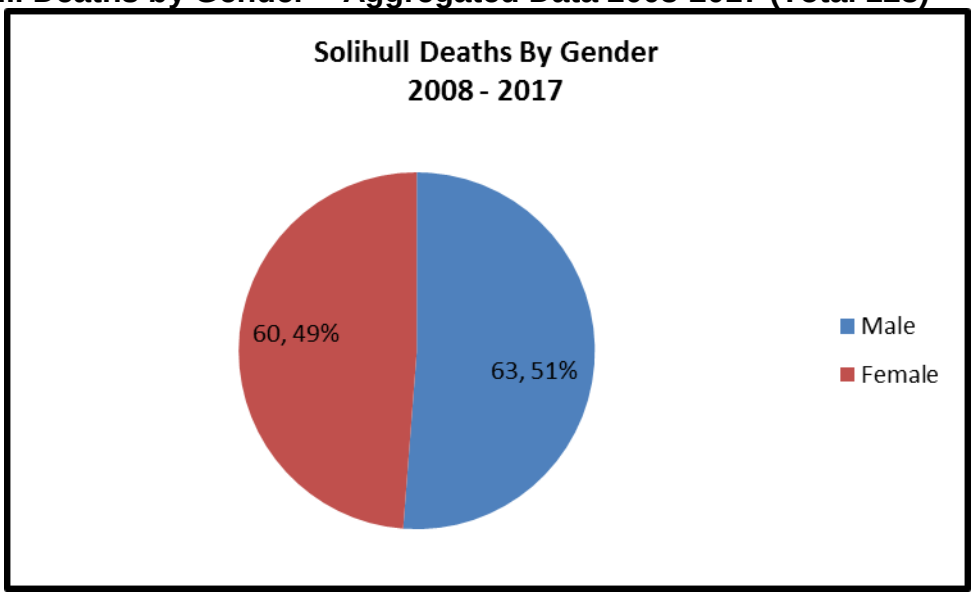
4.5 Solihull Deaths by Age – Aggregated Data 2008-2017 (Total 123)



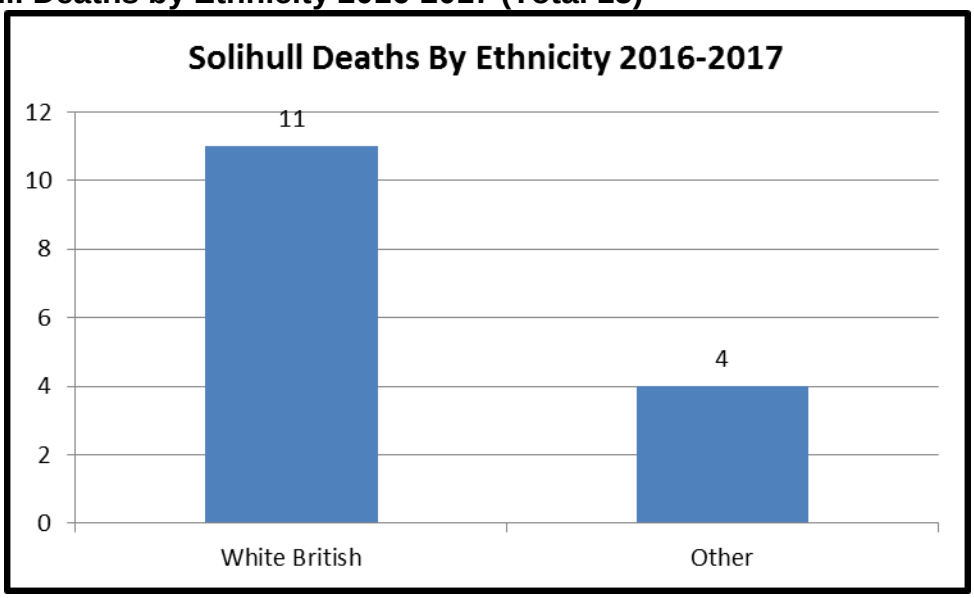
4.6 Solihull Deaths by Gender 2016-2017 (Total 15)



4.7 Solihull Deaths by Gender – Aggregated Data 2008-2017 (Total 123)

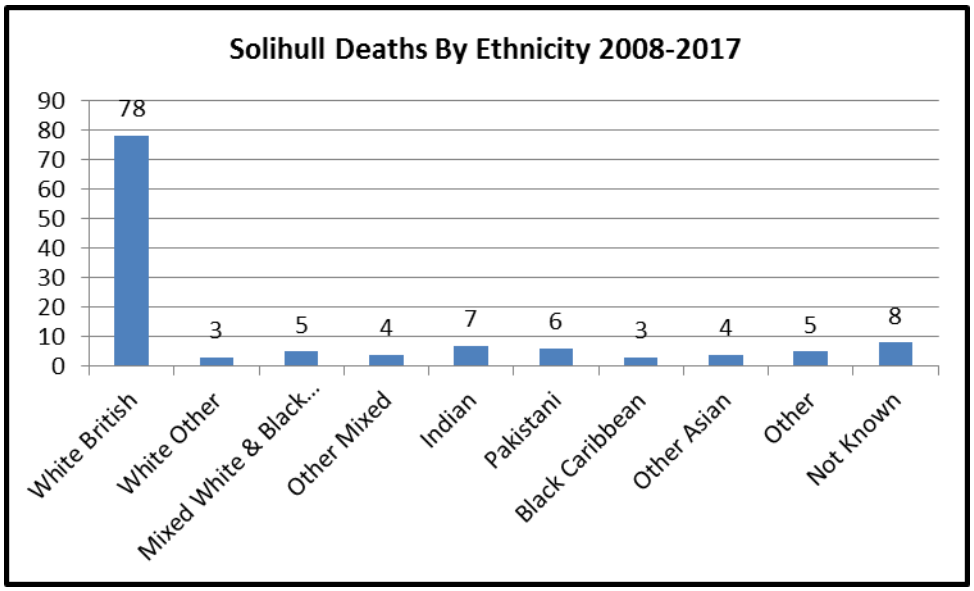


4.8 Solihull Deaths by Ethnicity 2016-2017 (Total 15)



4.8.1 Remaining ethnicities have been grouped under 'Other' due to single numbers.

4.9 Solihull Deaths by Ethnicity – Aggregated Data 2008-2017 (Total 123)



5 Summmary

5.1 0-27 days remains the highest age group as it has in previous years in both yearly and aggregated data. Looking at the aggregated data, the majority of deaths occurred within the first year of life, **77** out of **123** (63%) which is consistent with national findings and mirrors the findings of Coventry and Warwickshire too.

5.1.1 In relation to the aggregated data shown in paragraph 4.5; the highest age group is 0-27 days, followed by the age group of 28-364 days which is expected and consistent with previous years. However 10-14 year olds are shown as a close third to the 28-364 day age group with 17 deaths and a breakdown of this age group has been conducted to look at the types of death.

5.1.2 Of the 17 deaths, 12 were from a known medical condition. The remaining 5 were sudden and unexpected deaths all from trauma or other external factors. 2 from anaphylactic shock (as

referred to in paragraph 4.11 and 4.12); 2 as a result of a road traffic collision (1 pedestrian, 1 cyclist) and 1 from accidental asphyxiation.

5.2 With regards to gender, both the yearly data and aggregated data show more male deaths than females which is consistent with national findings and mirrors the findings of Warwickshire in both yearly and aggregated data and in the aggregated data for Coventry. Coventry data bucked the yearly trend by having more female deaths than male in 2016-2017.

5.3 With regards to ethnicity, children of 'White British' origin continues to be the highest category as it has done over previous years, with aggregated data showing 63% (78 out of 123) of children being from this ethnic group. This was the same ratio in the previous year. With regards to children from black and minority ethnic groups, their ethnicity did not have any bearing on their death.

5.4 The 'Not Known' are deaths from 2008-2009 when ethnicity was not requested on the national template forms. This changed in early 2009-2010 and ethnicity has been captured since.

Appendix 'C'

Warwickshire Child Death Overview Panel

1 **Overview:**
According to the mid-2015 estimates, there are approximately 125,251 children and young people aged 0 to 19 years living in Warwickshire which equates to 23% of the total population estimated at 548,729. This proportion is below the equivalent national and regional figures. Across Warwickshire's districts and boroughs, Warwick District (30,641) has the largest number of children aged 0 to 19 years, closely followed by Nuneaton & Bedworth Borough (30,133). Rugby Borough has the largest proportion of its total population aged 0 to 19 with one in four falling into this particular age group (25%). In contrast, in Stratford-on-Avon, 21% of the total population are aged between 0 and 19. (Source: Warwickshire Joint Strategic Needs Assessment).

1.2 Warwickshire's infant mortality rate (i.e. children under 1 year of age) is 4.4 per 1,000 live births. The infant mortality rate for the West Midlands region is 5.7 and for England, 3.9. (Source: Child Health Profile March 2017 for the period 2013-2015, published by Public Health England)

1.3 Warwickshire child mortality rate (i.e. children aged 1-17 years) is 9.3 per 100,000 children. The rate for the West Midlands region is 13.0 and for England, 11.9. (Source: Child Health Profile March 2017 published by Public Health England)

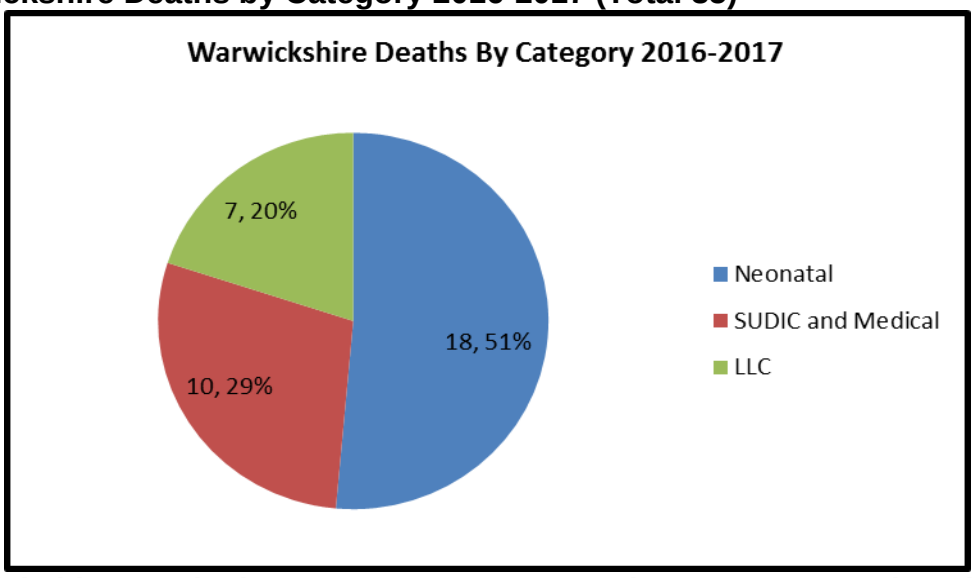
2 CDOP Members during 2016-2017:
Cornelia Heaney, Development Manager for Warwickshire Safeguarding Children Board (WSCB) (Chair)
Jenny Butlin-Moran, Service Manager, Service Development and Assurance (Children's)
Gaynor Armstrong, Lead Governance Midwife, George Elliot Hospital
Carla Elliott, Paediatric Matron, George Elliot Hospital
Victoria Gould, Young People Legal Services Manager, Warwickshire County Council
Detective Inspector Jacqueline McBrearty, Warwickshire Police
Dr Kathryn Millard, Consultant in Public Health
Adrian Over, Safeguarding Children Manager for Education
Lorraine Parsons, Clinical Governance Midwife, South Warwickshire Foundation Trust
Dr Peter Sidebotham, Consultant Paediatrician (Community)
Katrina Symonds – LSCB Lay Member
Alison Walshe – Director of Quality and Performance, South Warwickshire Clinical Commissioning Group
Linda Watson, Assistant Head for of Children, Young People and Family Service,
Co-opted members:
Dr Kate Blake, Consultant Neonatologist, UHCW
Maternity Services, UHCW
Warwickshire Road Safety team
West Midlands Ambulance Service

3 Details of the number of CDOPs held and the number of deaths reviewed is outlined in paragraph 2. A summary of recommendations and actions arising from Warwickshire CDOP are outlined in paragraph 5.

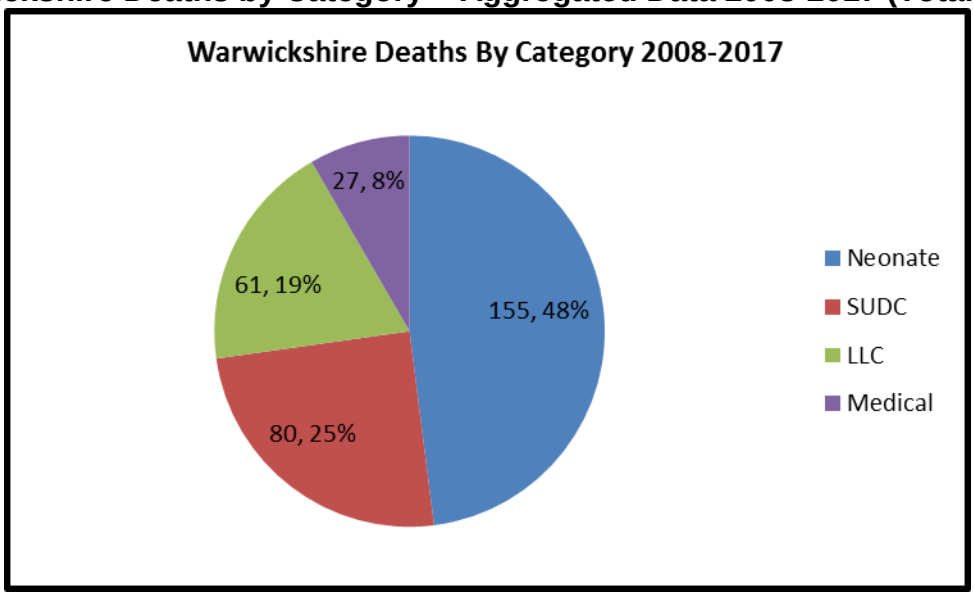
4 Warwickshire Child Death Data:
35 deaths were notified in 2016-2017, the same number as in 2015-2015. Deaths reported year on year since the process began in 2008 are shown in paragraph 26.1 and in Appendix 'E'.

4.1 Explanations of the abbreviations and categories are outlined in paragraph 25. Categories that have a total of 2 or less have been merged in accordance with disclosure control guidance issued by the NHS Information Centre for Health and Social Care.

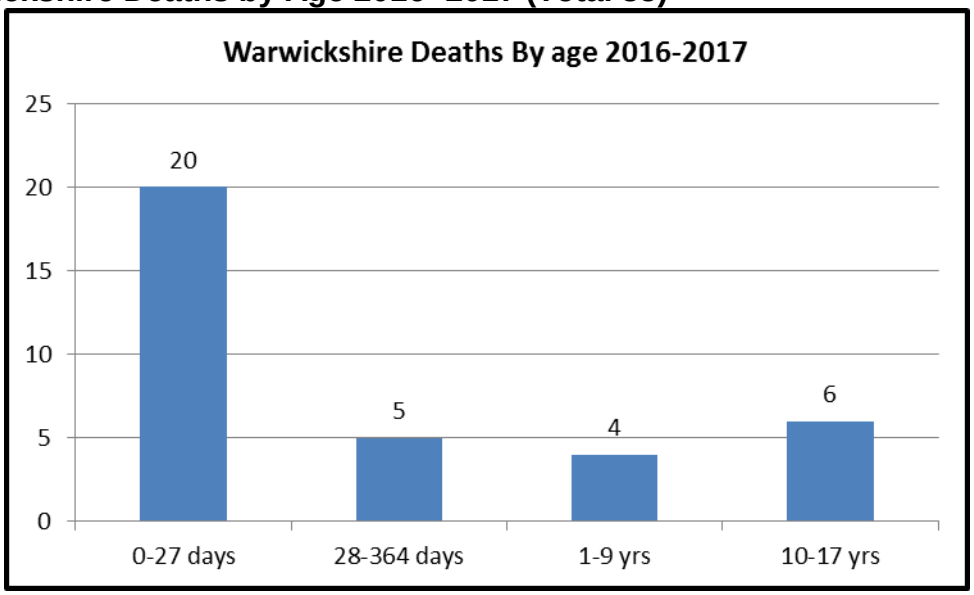
4.2 Warwickshire Deaths by Category 2016-2017 (Total 35)



4.3 Warwickshire Deaths by Category – Aggregated Data 2008-2017 (Total 323)

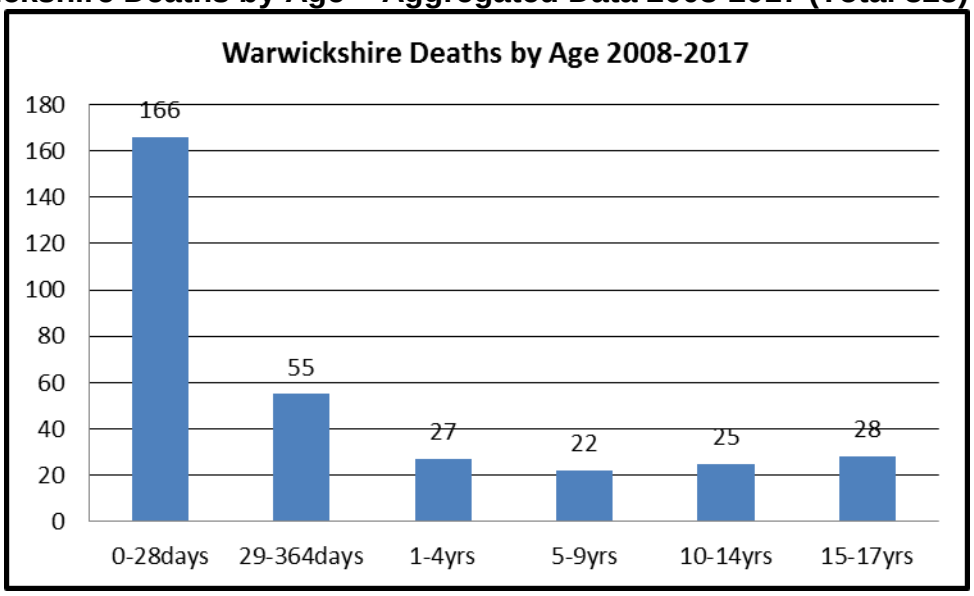


4.4 Warwickshire Deaths by Age 2016 -2017 (Total 35)

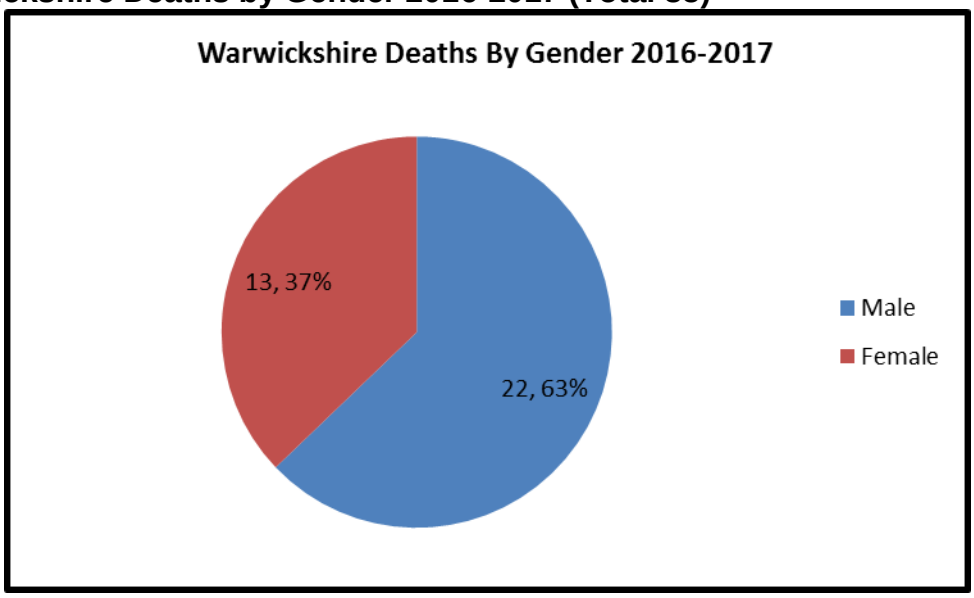


4.4.1 Age groups 1-4 years and 5-9 years have been merged together as have 10-14 years and 15-17 years due to low numbers.

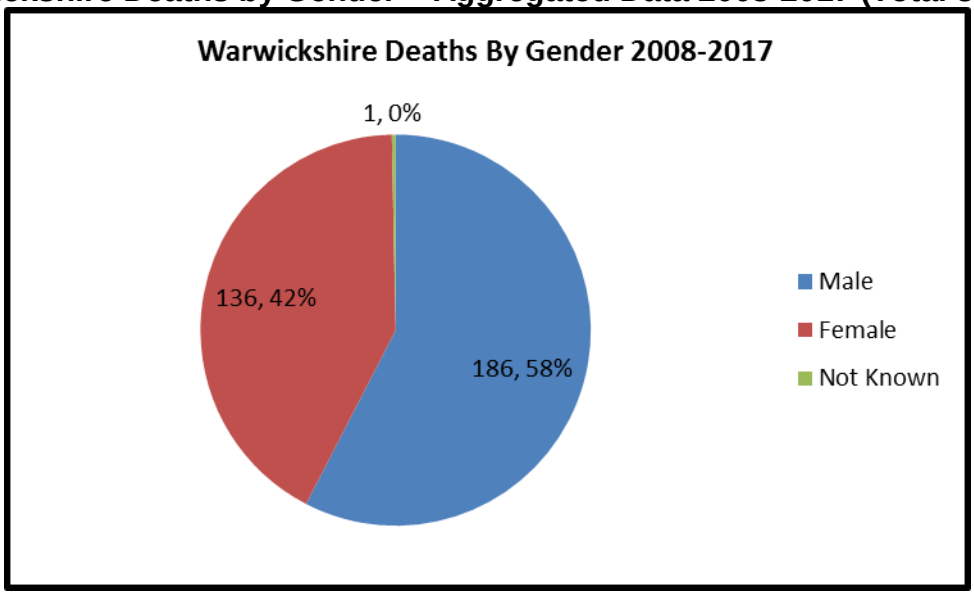
4.5 Warwickshire Deaths by Age – Aggregated Data 2008-2017 (Total 323)



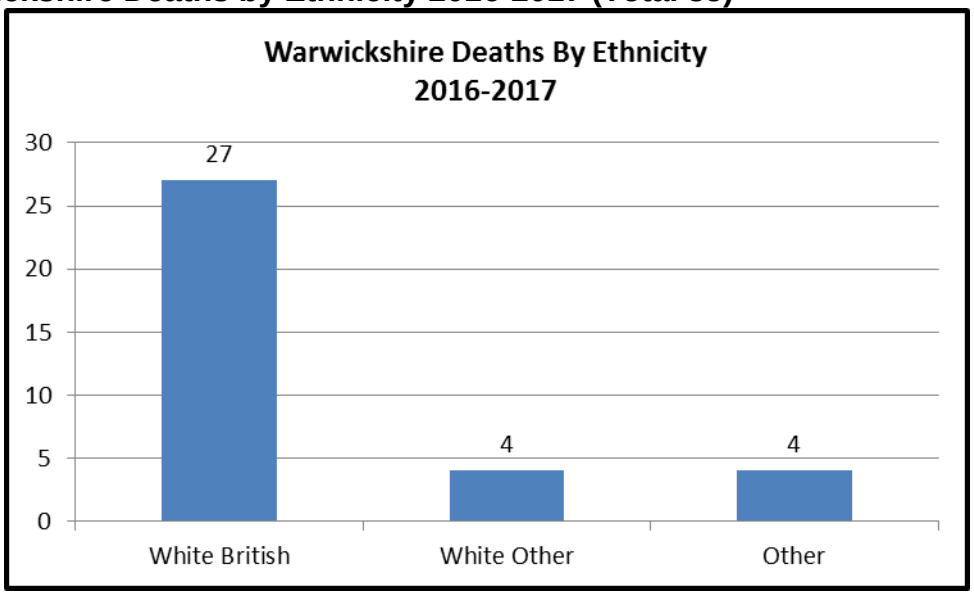
4.6 Warwickshire Deaths by Gender 2016-2017 (Total 35)



4.7 Warwickshire Deaths by Gender – Aggregated Data 2008-2017 (Total 323)

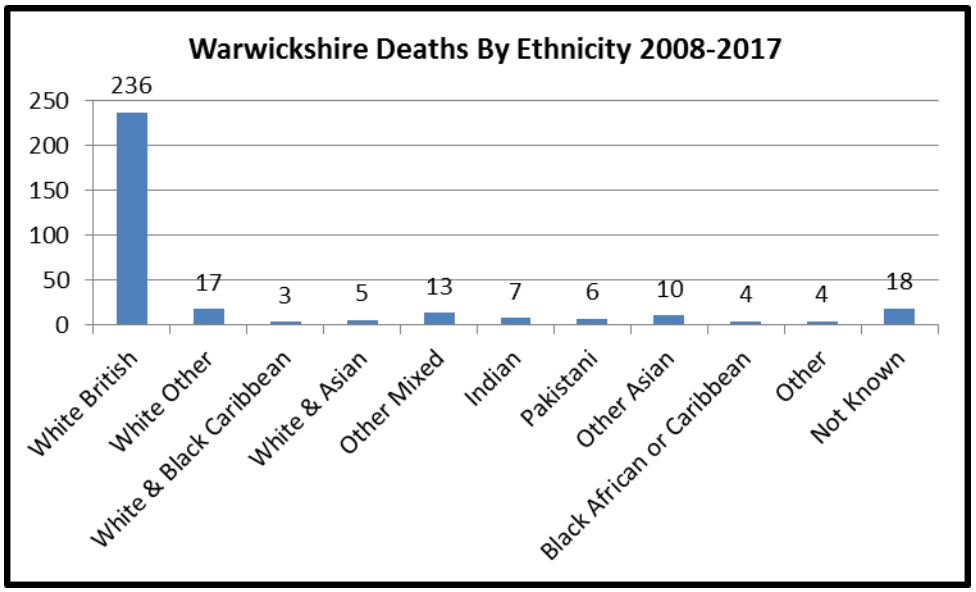


4.8 Warwickshire Deaths by Ethnicity 2016-2017 (Total 35)



4.8.1 'Other' deaths cannot be further categorised due to the low numbers.

4.9 Warwickshire Deaths by Ethnicity – Aggregated Data 2008-2017 (Total 323)



4.9.1 The 'Not Known' are deaths from 2008-2009 when ethnicity was not requested on the national template forms. This changed in early 2009-2010 and ethnicity has been captured since.

5 Summary

5.1 Neonatal deaths continue to be the highest category both yearly and from 9 years of aggreagted data which is consistent with national findings and mirrors the findings of both Coventry and Solihull.

5.2 0-27 days remains the highest age group as it has in previous years in both yearly and aggregated data. Looking at the aggregated data, the majority of deaths have occurred within the first year of life **221** out of **323** (68%) which is consistent with national findings and mirrors the findings of Coventry and Solihull.

5.3 With regards to gender, both the yearly data and aggregated data show more male deaths than females which is consistent with national findings and mirrors the yearly and aggregated data for Solihull and the aggregated data for Coventry. The yearly Coventry data bucked the trend by having more female deaths than male in 2016-2017.

5.4 With regards to ethnicity, children of 'White British' origin continues to be the highest category as it has done over previous years, with aggregated data showing 73% (236 out of 323) of children being from this ethnic group. With the exception of consanguinity as detailed in paragraph 7.1, ethnicity had no bearing on deaths from black and minority ethnic groups.

5.5 The 'Not Known' are deaths from 2008-2009 when ethnicity was not requested on the national template forms. This changed in early 2009-2010 and ethnicity has been captured since.

Appendix 'D'

'Joint Agency Response' (also known as Rapid Response Investigation) Sudden Unexpected Death in Children Protocol

Chapter 5 of Working Together to Safeguard Children 2015, defines the unexpected death of an infant or child (less than 18 years old) as a death:

- Which was not anticipated as a significant possibility for example, 24 hours before the death; or

- Where there was a similarly unexpected collapse or incident leading to or precipitating the events which lead to the death

Response to Unexpected Deaths

All Local Safeguarding Children's Boards are expected to have procedures in place to ensure there is a co-ordinated multiagency response to unexpected deaths. Where a death is sudden, unexpected and unexplained a 'joint agency response' will be instigated, as follows:

a) The immediate history taking, examination of the child and investigations will be carried out and support provided to the family.
b) The designated paediatrician will notify the Coroner, Police Senior Investigating Officer, Children's Social Care and immediate information sharing will take place.
c) A joint home visit will take place within 24-48 hours, by the Police and a health professional, i.e. a Paediatrician or specialist nurse to visit the scene of death; obtain a more detailed history; explain the process to parents/families and facilitate support to the family.
d) A post- mortem examination will take place.
e) An initial multi-agency information and planning meeting will take place chaired by the designated paediatrician, after the initial post-mortem results are known. This can take place verbally over the telephone if there are no concerns.
f) A final multi-agency case discussion meeting will be convened and chaired by the designated paediatrician when all of the information has been obtained, including the final post mortem report. All agencies known to the child and/or involved in the rapid response investigation are invited. At this meeting any contributing factors will be identified and on-going support for the family. The minutes of this meeting will be provided to the Coroner prior to the Inquest (if being held) and to the Child Death Overview Panel.
g) A meeting will be arranged with the parents to; discuss the cause of death and any contributing factors, identify and facilitate any on-going needs and advise re tissue retention. The professional(s) identified to meet with the family is agreed at the final case discussion meeting and is usually the designated paediatrician. If the family decline a meeting, the findings will be conveyed by letter by the designated paediatrician.
h) An Inquest may be held by the Coroner but changes to the Coroner's Rules states that the Coroner does not have to hold an Inquest if death from natural causes has been ascertained.

Warwickshire's procedures were reviewed in January 2016 and are published on the Warwickshire Safeguarding Children Board website. The guidance for West Midlands is currently under review.

Please see the following flowchart overleaf as detailed in Chapter 5 of Working Together to Safeguard Children 2015.

Process for rapid response to the unexpected death of a child