Table 1b: Summary of the data presented in the studies that are included in the systematic review

Authors [Ref No]	Country Of Origin of the Study	Study Methodology	No of cases studied (Total)	No of complaint cases specifically involving neonatal team	Category of Clinical problem	Category of Complaint	Litigation and financial settlements
Berglund et al, 2008 [10]	• Sweden	• Retrospective review of malpractice claims (1990-2005 nationwide insurance database) • Reviewed the immediate post-delivery management in medical case notes (obstetric and neonatal) of severely asphyxiated infants following presumed malpractice in labour • Authors highlighted failure events in conjunction with neonatal resuscitation specifically based on their neonatal resus guidelines	472	177	• Neonatal resuscitation of infants born with evidence of asphyxia born after 33 weeks of gestation	• Unsatisfactory resuscitation (delay in starting artificial ventilation, intubation or chest compressions) • Unsatisfactory drug administration (lack of adrenaline or correction of metabolic acidosis) • Late initiation of resuscitation (appropriate skilled person not present at delivery or delayed in arriving) • Resuscitation not interrupted (despite >15 mins of asystole, or not spontaneously breathing for >30 mins)	• Unknown
Fallahi et al, 2016 [11]	• Tehran	• Retrospective review of malpractice cases in Tehran 2012-2014 • Data from the Medical Commissions office (National database)	53	Unknown (due to cross over between obstetric and neonatal management)	• Cerebral palsy/birth asphyxia • Respiratory distress syndrome • Sepsis • Procedure related • Seizure	• Delay in diagnosis • Delay in treatment	• Unknown

Fanos et al, 2012 [12]	• Italy	• Retrospective review of malpractice claims (2005-2010) from a nationwide database in Italy • Studied neonatal claims specifically in the labour room, nursery and NICU.	661	191	• Death due to all causes including infectious, respiratory, cardiac, gastrointestinal, anoxic, other. • Permanent injury due to neurological, joint related, vision/hearing, malformative, infectious or other	• Error in diagnosis • Improper performance (incorrect action by doctor, also includes claims that are due to failure to supervise or monitor patient) • No medical misadventure (claim has legal merit, but no clear error or mishap was made by neonatologist) • Medication error	• Unknown
Hawdon et al, 2016 [13]	• United Kingdom (UK)	• Retrospective review of cases from NHS Litigation Authority Claims Management database (2002-2011) • Data extracted from the national database, letters of complaints and responses	28	28	Hypoglycaemia in infants >36/40 gestation	• Failure to appropriately monitor glucose levels despite risk factors • Early discharge without feeding support • Inadequate safety netting/discharge plan • Failure to take account of maternal concerns • Delayed testing • Missed diagnosis • Delayed referral to medical team once diagnosis made • Delayed treatment	• 25 cases damages paid • 4 cases defence only costs paid • 1 case no cost
Muniraman et al, 2017[14]	• United States of America (USA)	• Retrospective review of cases from Westlaw database (1980-2016) • National legal database • Review of medical and legal notes	15	7	Peripartum and immediate postdelivery management of infants born between 22+0-25+6 gestation	• Conflicts on resuscitation contrary to parental directives. • Miscommunication between families and clinicians.	• All cases were legally handled • 4 case verdicts in favour of professionals • 2 unknown verdicts • 1 case withdrawn

Nguyen J et al, 2017 [15]	• USA	• Retrospective review of cases from Westlaw database (Jan 1975- Aug 2016) • National legal database • Review of medical and legal notes	167	54	• Procedure complication (24%) • Retinopathy of prematurity (19%) • Resuscitation (13%) • Infection (13%) • Other (31%)	• Communication related allegation (35%- 19/54) • Of above, miscommunication specifically between clinician and family (74%) including lack of informed consent, lack of disclosure, lack of anticipatory guidance and management against parental wishes	• Unknown
Rennie et al 2018 [16]	• UK	• Retrospective review of cases from NHS resolution database (2001-2011) • Data extracted from the national database, letters of claim and response	20	20	Neonatal jaundice and kernicterus	• Delay in diagnosis (measuring serum bilirubin levels despite appearing visibly jaundiced and having risk factors for neonatal jaundice e.g., family history and presence of rhesus incompatibility with positive DAT cord test n= 8) • Lag time between recognition and readmission (range between 26-102 hours) n= 15 • System failures (lack of NICU beds and inappropriate wait times in A+E resulting in delayed treatment with phototherapy) n=2	• Total costs of handling all claims = £150.5 million
Zhou et al, 2019 [17]	• China	• Retrospective analysis of cerebral palsy malpractice claims collected from 1999-2017 • National database	400 (Data on errors available in 281 cases)	199	Cerebral Palsy	• Failure of timely and effective neonatal resuscitation • Improper handling of neonates (lack of observation, inadequate treatment or poor diagnosis) • Medical management error (lost or tampered medical records, poorly documented notes, clinician without proper qualification)	• Difficult to calculate for cases specific to neonatal error. Mean value of compensation of service provider was $73, 506

Ashcroft B, 2008 [18]	• UK	• Retrospective review of babies that had been admitted to the Neonatal unit with severe birth asphyxia • Collected over a set time period (Feb 2001-March 2002) from 7 maternity units (Regional data) • Cognitive interviewing technique of staff involved the data from the interviews and case notes were presented to an expert panel who applied the Bolam test to identify acceptable standard of care	37	26	Birth asphyxia requiring neonatal intensive care input	• Delay in resuscitation	• Unknown
Kaempf et al, 2016 [19]	• USA	• Retrospective review of live births in single centre (April 1996- Dec 2013) of infants born at 22+0- 26+6 to identify resuscitation and outcome • Highlight any cases with parental complaints or dissatisfaction expressed during counselling or formally via legal department	606	3	Management of extreme preterm infant against parental directive	• Lack of informed consent as parents felt they were pressured into making a decision without fully understanding the periviability counselling • Decision for palliative comfort care chosen by the parents was reversed • Inconsistent communication with healthcare team	• Unknown
Mangurten et al, 2000[20]	• USA	• Retrospective review of cases (1972-1992) • Single centre – tertiary NICU • Review of medical and legal notes	31	31	Seizure disorder (55%), hypoglycaemia (35%), pneumothorax (29%), HIE (23%), meconium aspiration (23%), asphyxia neonatorum (19%), IVH (16%), cerebral haemorrhage (16%), infantile apnoea (13%), hypotension (10%)	• Treatment error or delay (48%) • Missed/delay in diagnosis (16%) • Equipment misuse (6%) • General improper care (30%)	• 7 cases dismissed • 19 out of court settlement paid • 4 trials then damages paid • 1 unknown

Donn and Fanaroff, 2017 [21]	• USA	• Review article with 2 actual legal cases presented highlighting medicolegal issues around offering neuroprotective hypothermia	2	2	Hypoxic ischaemic injury (HIE)	• Violation of the standard of care by not offering neuroprotective hypothermia (NPH) for suspected HIE • Offering NPH in an infant with an unknown cause of neurological injury leads to presupposition of an acute intrapartum event (which might not be the cause of the presentation)	• Unknown