

Date: 23/01/2024

Before :

RECORDER SAMUELS KC
Sitting as a Deputy High Court Judge

Between :

A LOCAL AUTHORITY

Applicant

- and -

(1) A MOTHER

(2) A FATHER

(3) R AND G
(BY THEIR CHILDREN'S GUARDIAN)

Respondents

A MATERNAL GRANDMOTHER

Intervenor

Rebecca Mitchell instructed by the Local Authority
Clare Wills Goldingham KC and Chris Butterfield instructed by Wollens Solicitors for the
mother
Paul Storey KC and Alexa Storey-Rea instructed by Brendan Fleming Solicitors for the father
Henry Lamb instructed by Fort Solicitors for the Children's Guardian
Sophie Crampton (pro bono) through Advocate for the intervenor

Hearing dates: 8, 9, 10, 11, 12, 15, 16, 17, 18, 19, 23 January 2024

Judgment

Re G (Non-Accidental Head Injuries)

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Recorder Samuels KC sitting as a Deputy High Court Judge

This judgment was delivered in private. The judge has given leave for this version of the judgment to be published on condition that (irrespective of what is contained in the judgment) in any published version of the judgment the anonymity of the children must be strictly preserved. All persons, including representatives of the media, must ensure that this condition is strictly complied with. Failure to do so will be a contempt of court.

Introduction

1. These proceedings concern two children R and G. R is now aged 4 ½ and G is now 19 months old.
2. On 18 November 2022 (at age 3 months) G was taken to hospital by ambulance following episodes when he appeared to be fitting. Head scans revealed subdural bleeding of different ages. This bleeding raised concerns among the treating doctors that he had sustained inflicted non-accidental head injuries.
3. The mother of both children is referred to below as ‘the mother’. The father of both children is referred to below as ‘the father’. The mother is aged 34 and the father is 41. The parents met in September 2015 and commenced living together in March 2016. They married in September 2018.
4. The children’s maternal grandmother is referred to below as ‘the MGM’. She has been joined as an intervenor in these proceedings.
5. The local authority alleges that the mother, the father or the MGM (or possibly a combination of them) caused the head injuries to G, most probably by shaking him on more than one occasion. To cause such injuries the shaking must have involved excessive force beyond reasonable handling. Inflicting such injuries would have caused G significant pain and suffering, caused him to have intensive and intrusive medical treatment and leaves him at risk of long-term neurological damage. As a consequence, the local authority has brought these proceedings under s.31 Children Act 1989 seeking public law orders in respect of both children.
6. These allegations are denied by the parents and by the MGM. Each denies causing any non-accidental injury to G or being aware of any other person causing such injury.

7. This case was listed for a 11 day fact finding hearing commencing on 8 January 2024. I sent this written judgment out in draft to the parties on 22 January 2024.
8. My conclusion having read the written material, heard oral evidence and extensive submissions from experienced counsel is that the local authority has failed to prove its case against the parents and the MGM. I am not persuaded, on the balance of probabilities, that G sustained non-accidental injuries. This judgment gives my reasons for reaching that conclusion.

General Legal Framework

9. The legal framework for this fact-finding process is well established. I only summarise the framework below because it is not contentious. The principles set out do not require the citation of authority.
10. The burden of proving the allegations made rests upon the local authority. The standard of proof is the balance of probabilities. There is no burden or pseudo burden upon a parent or other carer to prove a negative case. Findings of fact must be based upon the evidence, including inferences that can properly be drawn from the evidence, and not upon suspicion or speculation. The evidence has to be evaluated in its totality including the relevance of the various strands of evidence to each other. The roles of the court and the expert are distinct. Whilst appropriate attention must be paid to the evidence of the medical experts, their opinions must be considered in the context of all of the other evidence. Experts advise but the court decides. In assessing expert evidence, the court must be careful to ensure that each expert keeps within the bounds of their own expertise and defers, where appropriate, to the expertise of others.
11. The court is likely to wish to place considerable weight upon the evidence of the parents and other carers and the impression it forms upon them, their credibility and their reliability as witnesses. The court must always be mindful of the fallibility of memory, the possibility of ‘story creep’ and the pressures of giving evidence. Recollections may change over time without any attempt to deceive, so

contemporaneous evidence will often have significance. There is a danger in relying too heavily upon demeanour.

12. Witnesses lie for many reasons, some of which may not be probative to the issue under consideration. Such reasons can include shame, misplaced loyalty, panic, fear or distress. Lies upon collateral matters may have less significance than those upon matters central to the court's determination. It is for the court to assess the forensic significance of lies and the probative weight, if any, to be attached to them. Lies are only capable of amounting to corroboration where they are deliberate, relate to a material issue and are motivated by a realisation of guilt and a fear of the truth.
13. In every case of alleged non-accidental injury the court has to be alive to the fact that unlikely events do occur. Medical science may not provide a definitive answer to each and every case. Today's medical certainty may be discarded by the next generation of experts. A consideration of unknown cause has to be factored into every decision-making process. It is not always possible to identify the cause of injury to a child. There will always be 'outlying' cases where the answer to what has happened is simply unknown or, to put it succinctly, is not capable of proof on the balance of probabilities.
14. It is for the local authority to prove not only the facts alleged but that the facts as proven satisfy the statutory threshold under s.31 CA 1989.
15. If the court is satisfied that G's injuries were caused non-accidentally then it must go on to consider the question of identification of the perpetrator or perpetrators of those injuries. The court will first identify a pool or list of people who had the opportunity to cause the injury. It will then consider whether it can identify the perpetrator on the balance of probabilities. Only if it is unable to do so will the court then proceed to consider whether there is a real possibility that each individual on the list inflicted the injury in question.

The medical chronology

16. G was born at 39 weeks gestation by elective caesarean section. His birth weight was 4.35 kg (over 9.5 lb). The birth involved the use of forceps to extract G. His APGAR score was 9 at 1 minute and 10 at 5 minutes. The newborn examination was normal and he did not require resuscitation. His head circumference at birth was 37 cm. He was discharged home from hospital with his mother the next day.
17. Examinations by the midwife during home visits on 23, 25, 27 and 28 August were normal. There was a health visitor visit on 31 August which again was normal apart from noting slight jaundice. G was seen by the midwife on 2 September and discharged into the care of the health visiting service. He was seen by the health visitor on 29 September with nothing unusual noted. His 6 to 8 week check was undertaken by his GP on 19 October. His head circumference was measured at 41 cm. He had his first set of vaccinations on that day. All examination findings were satisfactory at that stage.
18. On 28 October the mother reported G to be vomiting which became worse at night time. She reported there was blood in his nappy. The mother noticed that on occasion he had been struggling to catch his breath. He was quiet, sleepy, pale and not behaving normally. She called 111 and brought G to the paediatric emergency department. He vomited in hospital but was discharged. Examination was unremarkable and this was felt likely to be constipation followed by early gastroenteritis. His temperature was recorded as 37.9. He was unwell over the next couple of days and the mother called 111 again on 31 October. The mother reported that G was vomiting, was short of breath, floppy and had not been eating. The 111 operator called for an ambulance and G was brought back to hospital. It was reported that G had been vomiting, was very lethargic and quiet. He appeared very pale with mottled skin on his hands and leg. There were spots of blood in his nappy (later considered to be urate crystals). His temperature was again recorded as 37.9. All basic cardiorespiratory examinations were normal and G was described as alert. The examination showed him to have no abnormal neurology with good tone and normal power in his limbs. There was no evidence of acutely raised intracranial pressure. The hospital doctors considered that G was likely to have gastroenteritis. He was admitted to hospital and placed on an iv drip. He tolerated small feeds with no vomiting. On 1 November he tested positive for

Parainfluenza type 1 virus. He was discharged from hospital on 2 November. At that stage G was said to be feeding well, pink in colour and well perfused.

19. On 6 November 2022 the parents called an ambulance for G. They reported G to have been crying inconsolably and then, all of a sudden, to have become floppy. He was not responsive. He was breathing quickly and noisily. He looked like he was shivering or jerking. His eyes rolled back in his head. He can be heard crying noisily (or even angrily) in the 999 call but interspersed with periods of quiet. When the ambulance crew arrived they were able to wake G who cried but was consolable. He was alert and reacting appropriately. He vomited twice, projectile vomiting, including in the ambulance and vomited again on arrival to hospital. On examination he was mottled with raised heartbeat but was active on handling and alert. He had normal tone and his anterior fontanelle is described as normotensive. He was treated with fluids and antibiotics. He was discharged from hospital on 9 November. By that time he was said to be doing well, eating and drinking with no further vomiting. He was noted to have influenza and parainfluenza. One of the treating clinicians noted that G had perhaps a slightly increased tone on the left side.

20. On 17 November G had been unsettled in the day and difficult to settle at night. He was still awake at midnight. At about 4.30 am his father was holding him and noticed his leg was twitching then his arm began twitching and he began to drool. He appeared to be vacant. His parents called 111. It was reported that G had been unwell with a stomach bug. He had not been right since his release from hospital on 9 November. He started twitching again whilst his mother was on the phone to 111. 111 called for an ambulance. The ambulance crew reported a temperature of 38.4 degrees. Examination by the crew showed G to be alert with a normal conscious level. G had another fitting episode at hospital. He is reported as looking pale and mottled both centrally and peripherally. There was initially good tone, normal power and no abnormal neurology on examination. He then seemed to fall silent with his head turned to the right and not fixing or following – likely a short seizure. The working diagnosis was a seizure, potentially a febrile seizure, and G was admitted. No bruising was noted. G was treated with antiepileptics. An urgent CT scan was requested followed by, the next day, an MRI scan revealing subdural bleeding (as set out below). As a result, a referral was made to Children’s Services. He underwent a lumbar

puncture but the test results were normal. His temperature remained above 38 degrees and G tested positive again for parainfluenza virus on 23 November. A child medical was undertaken in relation to R on 25 November which was normal.

21. Both parents were noted to behave appropriately towards G in hospital. The mother was said to be affectionate towards him, soothing him when distressed. The father was similarly noted to be affectionate towards G. The mother was observed to show emotional warmth to R who appeared relaxed and happy in the care of his mother and MGM.
22. On 22 December 2022 G was discharged from hospital. The parents signed written agreements under s.20 Children Act 1989 for both children to live with their maternal grandfather ('MGF'). They moved out of their family home so that the children could live there with the MGF. They have continued to play a role in his care but supervised by other family members. On 10 February 2023 the local authority made this application for public law orders pursuant to s.31 Children Act 1989.

The wider canvas

23. All the professionals who have worked with these parents have nothing but praise for them. The views of the nursing staff at hospital were very positive. A letter from R's nursery describes the family in positive terms. Their health visitor described how the mother initially breast-fed G but then moved onto bottle feeding because it had been difficult to get G to latch on. She identified no concerns about the mother's emotional health. She responded appropriately to his feeding cues. She was observed carrying out patient gentle care both to R and G during the 6 to 8 week check. The children were appropriately dressed and the home environment was good. During this visit R (who has subsequently been diagnosed with autism) was upset but the father was seen to be patient and calm with him. On visits after these proceedings were commenced the parents remained appropriate with both children. The father described being terrified that G would hurt himself further.
24. I also heard evidence from the original social worker and a family support worker. The social worker told me that the mother had engaged very well with her. The father

had engaged equally well. They presented as a team and supportive of each other. The maternal grandparents had also engaged well. She could not fault the family's co-operation in what had been understandably difficult circumstances. R had appeared happy in his parents' care. The parents were seen to be very gentle with G and attuned to his needs. There were no concerns about the family other than the injuries G had sustained. The family support worker said that she had been welcomed into the house by both parents. G was very close to both his parents and seeks comfort from them when upset. The father is the quieter parent. He is a big person but his handling is gentle. G is also now close to his maternal grandfather ('MGF') (who has been providing primary care for him). She had no concerns about the MGM and the children are always pleased to see her. R was being parented appropriately in line with his autism diagnosis. The household is very calm and no-one shouts. Both parents deal well with R's meltdowns and anger. Her visits have been unannounced. There have been no concerns beyond a very minor issue concerning supervision.

25. I heard brief evidence from the MGF and the maternal uncle. The MGF appeared to me to have formed a strong bond with his grandchildren. He had put his grandchildren first by making himself available to care for them in the interim when their parents and the MGM had been ruled out as carers because of the allegations against them. On all accounts he is providing excellent care for G and R. He said he has never seen the parents behave inappropriately with the children. They have both shown nothing but patience, calmness and kindness. He could not see his wife, the MGM, causing injury to G. She has been a loving wife and mother to their own children and to her grandchildren. The maternal uncle also plays a significant role in supporting the arrangement as one of a number of supervisors for the parents. The MGM has for the last year cared for his children twice a week and before that was always available to help out. He has no concerns and trusts her 100%. He is sure she would not hurt G; she is someone who puts everyone else first. She is a fair, lovely parent and grandmother.
26. Both the MGF and the maternal uncle were at times tearful in their evidence. Their love for each other and for their children was very evident as was the impact of these proceedings on the whole family. Despite this, they have pulled together to support

each other and to provide an important safety net around these children whilst these proceedings have run their course towards this hearing.

27. On all accounts this was a stable, loving, supportive family. It remains so despite the obvious strains of the last 14 months. G was a wanted, planned for, child. There is no suggestion that either parent drinks alcohol to excess or uses illegal drugs. There is no suggestion of domestic abuse by either parent within this relationship or previous relationships. There have been no child protection concerns about R. G was seen regularly by medical professionals and was brought quickly for medical attention when needed urgently as set out above. There is no history of missed medical appointments. Both parents, and the maternal grandparents, have worked positively and co-operatively with a wide range of professionals.

The expert evidence

28. Dr Hogarth is a consultant neuroradiologist who was jointly instructed by the parties to examine the CT and MR scans taken of G's head in November 2022. The CT scan showed a subdural haematoma of intermediate density lying over the right cerebral hemisphere posteriorly. There were also lower density subdural collections anteriorly over the cerebral hemispheres on both sides. The MR scan showed subdural blood over the right parietal lobe with loculation and neo-membrane formation within the right sided haematoma indicating a chronic subdural haematoma. The left sided subdural collection is the same signal intensity as cerebrospinal fluid. Subdural blood showing T1 shortening was present over the right occipital lobe. There were blood products outlining the dural surfaces of both sides of the superior sagittal sinus. A tiny volume of subdural blood was seen as present within the lumbar intraspinal region. There were no other significant findings.
29. He did not see any fresh blood in the posterior fossa or the interhemispheric space as identified by Mr Jayamohan in his report. When questioned about this he said he was not convinced there was any blood there. There is blood behind the occipital lobe but that is, in his view, above the tentorium. That does not mean there is not blood there as identified by Mr Jayamohan but he cannot see it on the images. There were no scanning features of neuro metabolic disease or glutaric aciduria. He did not see any

widening of the sub arachnoid spaces but with fluid lying over them he could not say what they would look like otherwise. He saw no injury to the brain tissue on the scans.

30. Dr Hogarth was not able to identify any discrete focus of fresh blood. His description of the blood being of intermediate density probably reflects fresh blood mixing with older blood products. The MR scan results confirm the presence of a chronic (older) subdural haematoma. This contains blood of different ages which may be explained by re-bleeds. The dating of the older blood could potentially extend back to birth. There are other blood components that show high signal on T1 weighting suggesting their age is somewhere between 2 days and 3 weeks. The age of the intraspinal blood also appeared to be of a similar age. However, he made the point that timing intervals from scanning “do not represent absolute borders”.
31. The subdural bleeding had not been of sufficient volume to require surgical drainage. It had not been pressing on the brain. He would put the volume within the moderate range of the spectrum as it was more than a few tiny foci which are sometimes seen. However, taking into account the absence of other injuries, the damage was towards the milder end. He did not see any sub arachnoid blood or any other evidence of injury.
32. As for causation, a bumpy ride in a buggy (as took place in the care of the MGM on 26 October) could cause re-bleeding within an existing chronic haematoma but would not cause a subdural haematoma de novo. Subdural haematoma is a widely recognised sequela of abusive head trauma. It can result from a forceful shaking mechanism of injury with linear / rotational forces applied and with or without impact against a soft semi-yielding surface. The forces involved would be well outside what any reasonable carer would consider to be normal handling, but the precise forces cannot be known quantitatively. The origin of spinal subdural haemorrhage is not entirely clear. The spinal subdural space has no bridging veins as an origin for the bleeding. There are competing theories that divide experts. A proposed mechanism of blood tracking down from the intracranial compartment into the intraspinal compartment is supported by some and resisted by others. The alternative hypothesis involves direct injury to the local structures within the vertebral canal. Dr Hogarth’s view is that he is open to

either explanation and it may be that both are valid. Scanning of babies spines is not routinely undertaken so in terms of causation there is an element of the unknown. He would be much more comfortable in saying this was tracked blood if he could see clear evidence of blood in the posterior fossa. This is because the blood would have to follow a circuitous route from above the tentorium. It is possible for blood to track without leaving any deposits or any deposits that are visible. All he can provide are educated guesses on that topic.

33. In Dr Hogarth's view the lack of blood within the posterior fossa and cervicothoracic region leads him to favour damage to the local vessels in the lumbar region over a tracking explanation in this case but he cannot be certain. Spinal subdural haemorrhage is commonly seen in shaking injuries. He accepted that if he is wrong and there is blood in the posterior fossa and / or the interhemispheric space as identified by Mr Jayamohan then that would support the tracking explanation. Either way, however, he could not exclude that explanation.
34. Three studies undertaken by Rooks, Whitby and Looney show that birth related subdural haematomas are common and can arise from all methods of birth. They are more common in instrument assisted deliveries. In the Rooks study most of these birth related haematomas (15 out of 16 patients) had resolved by one month and all had resolved by three months. However, the studies are clearly limited by the small numbers of babies that were scanned. What they show is that birth related subdural haematomas are a recognised natural phenomenon and the limited data available tends to suggest they resolve with time.
35. A birth related subdural haematoma that fails to heal and becomes chronic cannot be excluded as a possibility. This is because haematomas that arise from other non birth related reasons do occasionally follow such a pattern and there is no reason to believe that birth related bleeds would behave any differently. Re-bleeding would not be expected to cause profound clinical changes. He questioned whether the healing process might cause an inflammatory response leading to brain irritation. The focal twitching of a limb and vomiting could be an indicator of something pressing on the brain. He accepted that a chronic subdural bleed could become smaller through

reabsorption as well as larger through re bleeding. However, ultimately he deferred to Mr Jayamohan on clinical issues.

36. It was entirely possible that there was a shaking incident on 26 October. This would have been expected to be accompanied by clinical symptoms. If the trauma was sufficiently forceful to cause subdural haemorrhage one would expect accompanying neurological signs from an accompanying brain injury (even if such injury was not evident from the scans). The clinical signs can be non specific and varied including poor feeding, irritability and decreased consciousness. He would not expect movement of a buggy across a rough path to cause subdural bleeding but it could cause re-bleeding. A shaking incident on 6 November would fit in with the scanning images. Equally, he cannot rule out a birth related injury. Most such injuries resolve within a month but it could be longer than 3 months. In the vast majority of cases the blood will be reabsorbed but there is no reason to say birth related subdural bleeding behaves differently from bleeding from other causes. Given the method of delivery it is entirely possible there was subdural bleeding.
37. His overall view was that he could not say that shaking is more likely than not from what he saw on the scans. There is a legitimate concern about inflicted injury but for him the cause of the subdural bleeding is unknown. If there had been a wider array of injuries this would have pushed him to offer an opinion to the court that post natal inflicted injury is more likely than not, but he cannot say that from the imaging. If he had imaging to compare from the peri natal period he would again be more confident about expressing an opinion.
38. Mr Jayamohan is a Consultant Neurosurgeon jointly instructed by the parties. He examined the CT Scan taken on 18 November 2022. He noted bilateral intermediate density fluid collections over both cerebral hemispheres and on the right side higher density material external to the intermediate density one. These would be in keeping with proteinaceous fluid bilaterally and sub acute blood in the right subdural space. He said “The brain itself shows some homogeneous appearance on the right hemisphere in the parietal region”. There was an important potential correlation between this appearance and G’s left sided seizure activity since the left side of the body is controlled by the right side of the brain. Having looked again at the imaging

prior to giving evidence he remained of the view that the right parietal region of the brain appeared abnormal on the CT (but not on the MRI).

39. He also examined the MRI scan taken on 19 November 2022. On that scan the brain appeared to be normally formed with no evidence of damage or injury. There were abnormal collections over both cerebral hemispheres. These contain proteinaceous material and over the right side the collection was larger. This shows areas consistent with fresh bleeding and also with membrane formation. This is in keeping with bilateral subdural collections of different ages with re-bleeding within. He was unable to confirm the existence of a thin subdural collection within the posterior lower lumbar theca (intraspinal). On any view the change is very small. If present, there are, in his view, similar signal areas in the posterior fossa dura and at the interhemispheric space which raises the possibility of there being a connection between the two, especially since G had been on the ventilator for a day by this stage.
40. To the extent that his interpretation of the imaging differed from that of Mr Hogarth, Mr Jayamohan appropriately deferred, in general terms, to Mr Hogarth's opinion. However, he maintained having looked again that he could see a trace of blood in the posterior fossa which he demonstrated by references to the imaging in court. It is an anatomical possibility for blood to travel from the head down into the lower part of the spine. Given the small volume present there it is possible that this has left a trace in the upper part of the spine not visible on the images. The effect of being on a ventilator would be positive pressure with oxygen and air being pushed into the lungs. When children are ventilated the positive pressure in the central nervous system, together with the fact the child is laid flat, increases the potential for blood to track from the head to the spine. He is not confident in saying this could not have happened here with such a small volume.
41. In his view the potential overarching explanation for these findings is trauma. None of the subdural collections show the appearance of very fresh bleeding. Once there is the potential for mixing of different ages of blood it can become difficult to ascribe an age to the density found. The origin of the subdural bleeding seen over the cerebral hemispheres may date back as far as birth. Instrumentation, such as forceps, carries with it the highest risk of subdural bleeding from birth. If G has vascular fragility,

then this would further increase the risk. The evidence from the Whitby, Rooks and Looney papers would suggest that such bleeding should dissipate and be reabsorbed after approximately 4 weeks. The risk of a birth related bleed remaining and becoming chronic is, in his view, an unlikely but potential explanation in this case. The creation of membranes ('neo membranes' because they are not part of the existing membrane structure) is rare and unusual but not impossible. If they occur with other causes of subdural bleeding there is no reason to believe birth related subdural bleeding will behave differently. Birth related bleeds are known to have the potential to be asymptomatic (he has clinical examples of this having occurred). Going against such a proposition is that G's head circumference centiles do not change between birth and 9 weeks old. If a birth related subdural bleed was to become chronic it would be expected to change the head circumference centiles upwards as it became older and larger in volume. He noted that at 16 December the head circumference remained at the 91st centile when there was clear evidence of bilateral subdural collections so these were not causing ongoing increasing volume issues. There were no signs of acutely raised intracranial pressure at the time of admission and the seizure activity would not therefore appear to be related to such pressure. The seizure activity (noted right from birth) was likely then to have come from brain tissue dysfunction directly. Whilst he could see no evidence of established brain tissue injury on imaging, it is possible that there was an abnormality or else the seizure activity is unrelated. The other possibility that would need to be considered and would explain "pretty much all the findings in this case" would be that G was subjected to multiple episodes of trauma with a progressively worsening presentation each time.

42. Re-bleeding into a chronic subdural collection can involve lower levels of energy including the possibility of occurrence with normal handling. New injury within the subdural space would require excessive handling not caused in the normal care of a baby unless there is an underlying disorder. He thought it unlikely that this was a case of a chronic bleed followed by a re-bleed because G's head circumference had not increased.
43. In Mr Jayamohan's opinion G's clinical neurological symptoms would not be caused by subdural bleeding. If there is an injury to the brain tissue (as he believes he sees on the CT scan) then this would explain the clinical changes and raises the concern this

has been caused by an injury. He accepted that there are other potential causes of such abnormalities including seizure activity itself, although that is more usually seen on an MRI scan rather than a CT scan. Meningitis was effectively excluded by testing. If such injury was there it was likely to be very acute because it had disappeared by the time of the MRI scan. He thought that if the seizure activity had been caused by injury then this should be established injury so one would expect to see it on the MRI scan. The fact it is short lived and goes away the next day tends to suggest it is caused by the seizures rather than the other way round.

44. The high-pitched cry heard by the mother would be more consistent with a neurological injury or event rather than a rebleed. He has heard such cries and read about them in the cases that he does. There are a number of potential neurological symptoms here alongside the focal seizures. G was floppy, vomiting, unhappy and not wanting to lie down. He was admitted to hospital unwell, did not receive much treatment, improved, was sent home and then came back in unwell again. That would be in keeping with multiple traumatic injuries to his head. Following removal from the care of his parents he had not needed further treatment which would support the proposition that the way he is handled now is different from before.
45. The EEGs do not show seizure activity and there have not been any further episodes, even though he is not now on anti-epileptic medication. The seizure activity in his view could be secondary to trauma. However, there are hundreds of causes of seizures and there may not be one unifying diagnosis. Going against some separate cause is that the seizures appear to have stopped following the admission on 18 November.
46. An injury on or before 26 October could explain the symptoms that followed on that occasion but not for G's later presentations because there was no established brain injury. 6 November was the day of the high-pitched cry when G was unwell all day, was quiet and floppy and was taken to hospital. That would be concerning for a neurological cause. Normally membrane formation would take at least 2 weeks so the time is a little short for such an event to explain the results of the CT and MRI scans on 18 and 19 November. However, there could have been multiple events since birth. The diagnosis of hEDS gave rise to a theoretical risk that G would have membranes that would break and re-bleed. If that accelerated the rebleeding process, then that

could accelerate membrane formation and in that event it was more likely that a timescale of 6 November for the causation of the older injuries could fit. The symptoms seen following 26 October and then 2 November could be neurological or not neurological. Vomiting and catching of breath could be related to the diagnosis of influenza. He did not consider it likely that subdural blood would cause an inflammatory response leading to clinical symptoms even in the context of chronicity.

47. Dr Keenan, Consultant Paediatric Haematologist, was jointly instructed by the parties to consider G's blood testing results. Initially he recommended further blood tests be undertaken to exclude rare blood clotting abnormalities. On receipt of those test results he confirmed that no blood clotting disorder had been identified. The subdural bleeding observed in G should therefore be considered to have occurred in a child with a normal blood clotting system.
48. Hospital testing effectively excluded the possibility that G suffers from Glutaric Acidaemia type 1.
49. Dr Saggar, Consultant in Clinical Genetics, was jointly instructed to consider whether there was any potential genetic issue in G relevant to the injuries he had sustained. Gene testing undertaken on his direction did not identify any genetic mutation associated with cerebral bleeding or Ehlers Danlos Syndrome ('EDS'). Testing revealed G to be a carrier for a gene associated with a rare genetic condition known as MCADD. However as is only carrying one such abnormal gene (the second copy of that gene is normal) this has no relevance for G as a potential explanation for his presentation.
50. Dr Saggar identified a clear family history of a connective tissue disorder in keeping with a hypermobile spectrum disorder, or hEDS (formally known as EDS type III). Diagnosis of this condition cannot be made from gene testing (at present) so this is a clinical diagnosis based on history and examination. The history for G comes from both his maternal and paternal sides and G has at least a 50% risk of having inherited this. On examination there was some evidence to suggest G had inherited minor aspects of it. He had a Beighton score of 6/9 (6 and above is abnormal), fine hair texture, easier bruising after the taking of blood, multiple bruises on his skin and a

high / abnormal palate. hEDS may predispose G to a greater degree of bruising and / or bleeding. It is, says Dr Sagar, a controversial issue as to whether a lesser force is required to cause cerebral bleeding in children or adults with hEDS. It is his clinical experience that such patients do not present with spontaneous internal bleeding and he has not seen subdural bleeding described in patients after normal handling or even rough handling.

51. If birth is considered as a plausible event giving rise to subdural bleeding then a child with an inherited susceptibility to easy bruising may bleed more easily at birth. Dr Sagar did not know whether hEDS affects propensity to bleed but we do know that the healing process is unusual with hEDS. hEDS is a form of vascular fragility rather than a bleeding disorder. The impact of hEDS therefore on propensity to suffer a birth related subdural bleed, for that subdural bleed to become chronic and for rebleeding to take place is unknown, however as a matter of logic and common sense it may have an impact. There are no studies about birth related subdural bleeding on babies with hEDS. However, there has to be some form of trauma initially to cause the injuries because even children with hEDS do not bleed spontaneously.
52. Lastly, Dr Elias-Jones, Consultant Paediatrician, was jointly instructed by the parties. He reported that the haematology and biochemical tests undertaken for G were essentially normal. He does not believe that the reported episode in the buggy on 26 October going over rough ground was sufficient to cause intracranial bleeding. Subdural bleeding can be caused by a difficult instrument delivery, but G's birth APGAR scores were very good and his newborn examination was normal making this less likely that his delivery had resulted in significant intracranial bleeding. The other possible explanation would be multiple shaking episodes although this would be in the absence of any rib or long bone fractures or retinal haemorrhages often seen together in episodes where a baby has been shaken. Clinically when the intracranial haemorrhages occurred G might have cried initially in pain and remained irritable afterwards or may have had a depressed conscious level and reduced feeding and may develop limb shaking or twitching. If caused by shaking the force required would be significant and not within normal handling. Overall, he considers that G sustained an inflicted injury from shaking. There were likely to have been repeated episodes but at the lower end of the level of force given the absence of other possible injuries from a

shaking episode such as rib or long bone fractures and retinal haemorrhages. There was likely to have been an incident close to the time of presentation on 6 November and another incident between 6 and 19 November.

53. Dr Elias Jones agreed with Mr Jayamohan that G's clinical presentation was unlikely to be the result of an inflammatory response to the subdural bleeding. He had a big head circumference at birth so he did not consider that head circumference helped when considering the likelihood of G having had a birth related subdural bleed. He agreed that the high pitched cry G which was said to have come from G could have been neurological and may have been the result of a re-bleed following an episode of trauma. He accepted that there can be a crossover between neurological and other symptoms. Flu does not normally cause neurological symptoms unless it causes encephalitis. He agreed that G has to be looked at through the lens of a child with hEDS and that there is no research about hEDS children in the context of birth related subdural bleeding. He agreed that the parents had presented G appropriately to hospital on each occasion when he appeared to have become unwell.
54. When he was asked to consider why he preferred injury as an explanation rather than a naturally evolving phenomenon Dr Elias Jones explained that was his 'gut opinion'. He accepted the possibility of a birth related subdural bleed and there could have been re-bleeding into the previously established haematoma and could not discount the possibility this would have been spontaneous. However, he believed trauma to be more likely. He wondered whether given the absence of other injuries there could have been "innocent episodes" where the carer did not believe they were doing anything beyond normal handling. He gave an example of a carer throwing a baby up in the air and catching them. No-one can be sure what degree of force is required to cause subdural haemorrhaging.

The mother's evidence

55. The mother set out some background information about her history in her first statement. She spent time in France as a teenager initially moving there with her parents and then she stayed there for a further year working. She describes a stable happy childhood and her family did not come to the attention of the local authority

save for a brief issue over a minor injury she sustained when in primary school. She has been employed as an airport security officer since 2012. She met the father in 2015 and they married in 2018. She describes their relationship in positive terms, they are supportive of each other and there have been no issues in their relationship. R was born by way of an emergency caesarean and was large a healthy baby save for some colic and eczema. He has recently been diagnosed as on the autism spectrum. She describes having two miscarriages between R's birth and G's. G's birth was a planned caesarean with "a lot of heavy tugging to get him out".

56. Until October 2022 G was a settled healthy baby. She breast fed him for the first 5 weeks then transitioned to formula milk. One thing they noticed was that sometimes he would get a twitchy left leg. There would be quick, repeated movements for a few seconds and then it would stop. It was infrequent but appeared to be random. She noticed this almost immediately after G's birth.
57. The mother took maternity leave from her employment until February 2023. The father was, by that time, self employed but took August off as paternity leave. R was on holiday from nursery in August returning in September 2022. She describes the parents sharing the care of the children equally. Once G was no longer breast fed they shared both day and night feeds. R had his own room and G would sleep in a cot next to the parents' bed. The father would work from home doing administrative tasks during the week and would be coaching sport at weekends. If the father was out of the house the MGM would often come over to help.
58. On 26 October G was cared for by the MGM for several hours when the parents took R out for the day. This was from about 9 am until about 8 pm. When they returned home the MGM mentioned that G seemed to be catching his breath a lot and she was concerned she might not have winded him fully. This had started about half an hour before they had returned home. This was not said in a way that indicated G needed urgent medical attention, just something to be aware of and keep an eye on. She did notice G catching his breath but was not too alarmed. This symptom disappeared the next day but then G started vomiting. It was not after every feed so G was managing to keep some milk down. However, this got worse overnight and she noticed what she believed to be blood in his nappy. She therefore called 111 and took G to hospital on

their advice. The doctors did not find anything wrong with G and he was discharged home.

59. G improved over the next few days but on 29 October he was unwell again. She called 111 but was told the wait time was very long so decided just to monitor the situation. G became better during the day but worse again at night. He was unwell again overnight on 30 October so she called 111 on 31 October and an ambulance was dispatched. G stayed in overnight until 2 November.
60. G again appeared to improve over the next few days but was not himself. He was pale and his skin was mottled. On 6 November G had been unhappy during the day and she felt he was getting more agitated as time went on. She took R to a birthday party that afternoon leaving the father with sole care of G. She would not have gone had she been very concerned about G that day. At about 7 pm both parents and both children were in the bathroom while the mother was bathing R. The father was sitting on the toilet seat holding G facing forward. On a couple of occasions their dog grabbed an item of clothing or a nappy and ran downstairs with them. The father would then rush after the dog to retrieve the item, still holding G. On one occasion when this happened the mother heard G give a high-pitched cry. It was a cry she had never heard before from G. It was much louder and more high pitched than his normal cry. G then suddenly went quiet and she could hear the father saying G's name over and over again. The father shouted upstairs and the mother took R out of the bath and shouted downstairs "what's wrong?". The father came running up the stairs with G and said they needed to call an ambulance. She could see G was floppy in the father's arms. He was not moving and was making limited murmuring noises and movements. The father appeared to be very distressed, in shock and panicking as they both were. He had only been out of the room for 30 seconds to 1 minute. When she saw the father with G he was holding him appropriately with one hand under his bottom and the other arm around his torso with G's head against his chest. By that stage of his development G had some head control. They called 999 and were told to put G in the recovery position. They took him downstairs and lay him on a changing mat. Within a few seconds of being in the ambulance G became alert and started to vomit. The paramedic asked if they were sure he had not just been asleep. He was taken to hospital and kept in until 9 November.

61. On discharge G again seemed okay but not 100%. He continued to vomit occasionally. On 17 November G was quite unsettled during the day. R was at nursery from 9 am to 3 pm. She believed the father collected him from nursery at 3 pm leaving her in the house with G. G was not crying excessively but was not in a good mood. They decided to share a bed that evening so they could both keep an eye on him (previously one of them had slept in the spare room to get a better night's sleep). G was difficult to settle that evening and was still awake at midnight. In her statement she said that at about midnight the father had given G a large bottle which he drank and then fell asleep on the father's chest, but in her oral evidence she said she believed that had happened at about 3 am. She was dozing in bed next to him. The father they said at about 3.30 to 4.30 am the father told her that G's leg was twitching and she opened her eyes and saw his left leg moving. They lay him flat on the bed and his left arm started twitching and he began to drool. His head turned to the side and his eyes also started to move / twitch. This lasted for a few minutes. She called 111 and they dispatched an ambulance. Whilst they were waiting for the ambulance G started to twitch again and the mother took some videos to show to the doctors (I have seen these). She says the twitches seemed different to those she had seen before. They were slower and lasted for a longer time. She had also not seen his arm twitch before.
62. The mother was asked by Ms Mitchell about her decision to stop breast feeding. She did not know whether she told the health visitor that this had stressed her or G and she did not tell R's speech and language therapist that she found it difficult to manage breast feeding with R needing her attention. She said that the situation was not stressful as the father was there to support her and, if not, her mum was available. She confirmed that R has been diagnosed with autism but she and the father were able to manage him well. She agreed that babies are hard work but described their routine to ensure one of them was able to sleep during the night. She said she had found it harder being a first time parent with R than she did with G. They were not as anxious with him and she had a lot of help. Sleep deprivation was not an issue for her as she was used to shift work as the father was. The father had always been open with her about his mental health history and she knew that he had found things difficult after R was born. He went to see his GP and they discussed it as a family. He can be quite

quiet and introverted with others but with her he is very open. She is sure that if he had harmed G he would tell her.

63. The mother was asked why she had not told the hospital on 6 November about the high-pitched cry she had heard from G. She said she was more concerned at that time about describing G's physical presentation. She denied trying to cover up something. She did not believe anything had been done to G whilst he was out of the room. She said the decision to sleep in the same bed in the lead up to 18 November was taken because they were both worried about him and did not want the other to be on their own. On the night of 17 / morning of 18 November she does not believe the father got out of bed because he would have had to climb over her to do so. She believed she would have noticed if the father had shaken G that night. She agreed they both had the opportunity to shake G when on their own with him but denied that had happened. They were worried and she agreed that, as a result, they were not getting as much sleep as normal. However, she maintained they were calm patient people and working as a team.
64. She had never seen the father lose his patience. He had never lost his temper with her or generally. The father had been depressed and off work when R was 3 months old. This was triggered by a discussion about redundancy at work. He made the decision himself to try anti-depressants and had some counselling. It did not cross her mind to raise this at the hospital or as part of the s.47 investigation. She denied trying to hide anything.
65. She described her mother as warm, loving and caring. She is a calm and patient person. A fantastic mother and grandmother. She is someone she trusts with both of her children and she had looked after R frequently on her own without incident.
66. I formed a very positive impression of the mother both in the course of her evidence and from observing her during the hearing. I found her to be a calm, thoughtful and articulate witness. She was not defensive or confrontational. She conceded points when appropriate to do so. She was appropriately emotional on occasions. She struck me as an honest historian doing her best to give a full and truthful account of events.

The father's evidence

67. The father explained that he had a somewhat disjointed education. He attended a specialist primary school unit to catch up and then secondary school where he obtained some educational qualifications. His primary interest was in sport which he enjoyed. He obtained an NVQ in Business and Finance and then studied International Business Studies. When he finished University, he became a restaurant manager and then travelled working abroad, finally returning to live in England in 2011. He also worked in airport security until 2020 becoming a team leader. Covid had a significant impact on the travel industry and, fearing redundancy, he bought a sports franchise teaching young children. He has now sold the franchise. He had found it more difficult to work with these allegations over him because he could not be alone with any children. He now has a new job. He described the start of his relationship with the mother in 2015 up until their marriage in 2018.
68. With R he described himself as a helicopter parent, careful and cautious. There were no health concerns about R. When G was first born he seemed normal and happy. As with the mother's evidence he described them working as a team. There were times when each was alone with G.
69. They left G with the MGM on 26 October when they took R out for the day. When they returned home at about 7 to 7.30 pm the MGM seemed a bit worried. G had recently had a choking motion and did not seem to be swallowing property. It was not something to be particularly concerned about, just to keep an eye on. G seemed okay to them. They wondered whether it might be a reaction to his immunisations. G was sick that evening but did seem to be swallowing normally. G continued to vomit and appeared to be constipated so they contacted 111 on 28 October and took him to hospital. The hospital seemed to think he had a virus or illness of some kind. They took him back to hospital on 31 October as he continued to vomit and was refusing his milk. He had mottled skin and they noticed what they believed at the time to be blood streaks in his nappy. He was admitted to hospital for 2 nights and then discharged.

70. On 6 November G had been difficult all day. He was unsettled, struggling to bring up his wind and vomiting. That evening the mother was bathing R and he was walking around the house attempting to settle G. G was crying and the father went up and down stairs a few times. Sometimes just to settle G and sometimes to collect an item of clothing or a nappy that their dog had taken from the bathroom. On one occasion when going after the dog he went downstairs quickly but fully supporting G when he did this. His left arm was around G's chest area with his right hand under G's bottom and legs. G's head was resting against his body and he was facing forward. When he was downstairs he walked around the kitchen table and saw G in the mirror. G went into what looked like a spasm. His eyes rolled back and he went floppy. He thought G was having a seizure. Then he started shaking. He was almost lifeless, like a deadweight on his arm. He started saying G's name to try to get a reaction and pinching his toes. He was not responding. He went back upstairs and they rang 999. When the paramedics arrived they asked whether G had been sleeping but he had not been. He seemed to jump back into life and was sick in the house and then again in the ambulance. G was admitted to hospital but then discharged on 9 November. The hospital did not seem overly concerned and they trusted their judgment. The general view of the hospital was that there were lots of illnesses and infections going round with lots of unwell children. G had also tested positive for parainfluenza.
71. G continued to be sick when he was discharged from hospital. He might go 24 hours without vomiting but then would start again. He was taking his milk. He was also extremely pale with mottled skin. He did not want to be put down. He did not sleep for more than 1 to 2 hours at a time. He seemed to deteriorate progressively which was why he and the mother decided to sleep in the same room with G so they were not alone with him. On the early morning of 18 November G was sleeping with his stomach on his chest. G had slept for a couple of hours after midnight. He laid him in his cot. When G woke up he fed him. G took about 7 to 8 oz of milk. He cannot remember if he also changed him. He tried to settle G back in the cot but he would not settle so he picked him up and put him on his chest. G settled and fell asleep but the father remained awake. He felt a tapping on his stomach like a twitch. He woke the mother up to tell her about the twitch. The mother googled what this might be and said it might be a muscle spasm as this was common in babies, but to him it felt more than a spasm. The twitching movement went up the leg to the arm and then the side of

his face seemed to droop and he was drooling. He seemed distant. They called 111 who sent for an ambulance. The father went with G to hospital and felt that his concerns were not being taken seriously and they were being dismissed again. He kept telling them G did not seem right. He wondered whether the doctors found it difficult to understand him because of his Irish accent. They were not interested in seeing the videos they had taken of G. Eventually the medical staff did see G having what they thought was a vacant seizure and realised something was not right. He has been described as being emotionless but was in shock and he cried when in the cubicle with G. He spoke to the mother and told her she needed to come quickly as there was something seriously wrong with G.

72. The father has provided details of his mental health history. He had difficulties in 2011 linked to his gambling at the time. He sprayed some bug spray into his mouth and made superficial cuts to his wrists. It was more a cry for help than a serious attempt on his own life. He funded psychotherapy for himself between 2012 and 2015 which helped considerably. He attended gamblers anonymous. He started gambling again briefly in 2015 and sought help again. He has not gambled since starting his relationship with the mother. His mental health deteriorated again around the time of R's birth because he was worried about redundancy alongside having the responsibility of being a new father. He was prescribed medication but this made him feel sick and affected his sleep. He started working with an occupational therapist and underwent CBT. When he returned to work he became a mental health advocate for others. He denies having had any mental health issues since the birth of G and believes he is well attuned to his own health and to recognise any signs of deterioration. His previous mental health issues had never been associated with violence or temper. He described himself as someone who is patient and calm. He does not raise his voice or get angry. His first priority is his family. He did not tell the doctors at hospital about his mental health because he did not think they needed to know his whole life history. G was on a ventilator at the time and it did not seem appropriate to go into that level of detail. He did not disclose his history in 2011 to the social worker completing the s.47 investigation. It was only when preparing his statement that his solicitor told him he needed to go right back in time and share his whole mental health experience.

73. The father was asked about his relationship with the maternal family and described the MGM and MGF as perfect grandparents. They had never moaned or complained despite these proceedings having turned their lives upside down. He cannot fault the MGM and cannot believe she would have caused injury to G. He last saw his parents when they came over in December 2022. They had found the whole situation overwhelming. They both have significant health issues and his father does not like to travel. He has 2 brothers. I formed the impression that his relationship with his own family is less close than it is with the maternal family. That is not necessarily unusual.
74. He denied knowingly causing any injury to G. He denied shaking him. He agreed that both parents had time alone with G. If the mother was frustrated about feeding it was because she was worried G was not getting enough milk. He agreed that having a new baby involves a whole range of new care needs. G was more difficult to care for because he was not well. That would increase the stress levels in any household. He would care for G if the mother was looking after R. He denied having any financial issues. At the time he had government loans and grants for his business and because of Covid. The financial impact on the family has been much greater since proceedings were commenced.
75. I watched the father carefully during his evidence and the whole hearing. I found him to be a straightforward witness who gave clear consistent evidence. I did not find him to be hostile or defensive. Although Mr Storey at one point felt the extensive questioning about the father's mental health to be oppressive, the father himself had no difficulty answering questions about it. The father made concessions when appropriate. As with the mother, he appeared to me to be an honest historian trying his best to give a full and truthful account of events.

The MGM

76. The MGM described in her evidence her extensive experience caring for her own children and now her grandchildren. She and the MGF have now been married for almost 40 years. She described how these proceedings have been very stressful for the entire family, but they have come together to support each other.

77. She cared for G on three occasions alone. On 10 September the mother took R to a birthday party and she cared for G for a couple of hours in her home. She does not remember anything remarkable happening. On 18 September she looked after G from about 9 am to 5 pm when the parents went on a spa day. She picked up R that day from nursery. Again, she cannot remember anything remarkable on that day. On 26 October the parents took R out for the day and she looked after G from about 9 am. He was a good baby and he had a bottle approximately every 3 hours with no problems. He slept at about noon. She then took him for a walk in his pram with the dog. The pram was a Silver Cross and G was lying on a sheepskin pram liner. The pram had been new for R. They did not go far but the walk included a stony path on the way to a children's playground. For a few seconds the path meant it was a little "jolty" in the pram but she did not think anything of it at the time. G did not cry out or react in any way. They went home by which time G had fallen asleep in the pram. Nothing remarkable happened for the rest of the day but just before the parents came home at about 8 pm she gave G a bottle of milk. He drank most of it but then seemed to choke a little and caught his breath. She thought he was going to be sick. She told the parents about it and it happened again a little in the parents' presence. She thought it was likely to be constipation.
78. She described both parents as doting on their children. She did not find R difficult to manage but he did thrive on one-to-one attention. G was a much wanted and precious second baby. She accepted that it can be hard for any family to care for two young children and things get more difficult if a child is ill. She agreed breast feeding was problematic for the mother, but she dealt with it well, expressing milk initially. The mother did not find it difficult to care for both children but she would come over when the father was at work because it was nice to be with her daughter and she could provide an extra pair of hands. She denied shaking G herself and had never witnessed the mother or the father losing their temper. She knew about the father's mental health issues when R was young but he was not a man to be impulsive under stress. The whole family have been and have needed to be strong. The parents are a good team with a stable home environment. The whole family are just desperate to understand why G has had these bleeds and to ensure he gets all the medical help he needs.

79. As with all the family members I found the MGM to be a straightforward witness. A calm and measured person. She was appropriately tearful at times when speaking about G being unwell and the impact on the whole family. My impression was that she was someone searching for an explanation for G's presentation rather than hiding or assisting others to hide an explanation.

Submissions

80. At the conclusion of the evidence the local authority's position changed in that they now seek to persuade the court that a) G sustained non-accidental shaking injuries on a number of occasions and b) the father can be identified as the perpetrator of those injuries. They no longer maintain any allegation against the MGM, considering her to be a consistent and credible witness and an experienced carer unlikely to have caused injury to G. They question whether the mother has been dishonest about her account of 18 November 2022, but otherwise maintain no substantive allegation against her. They do suggest, however, that she has minimised their concerns surrounding the father's mental health and has been protective of him.
81. Their evidence against the father centres upon his care for G before the calls for medical help on 6 and 18 November, his history of mental health issues and the undoubted stresses and strains of caring for 2 young children (R with autism and G who had been unwell for several weeks). They rely upon the medical evidence as supporting a conclusion that shaking is the most probably mechanism to explain the subdural and spinal blood as well as the clinical symptoms exhibited by G. The high-pitched cry, termed a 'neurological cry' by Mr Jayamohan is, says Ms Mitchell, a strong pointer towards a head injury having occurred on 6 November whilst the father was downstairs with G.
82. The mother, father and MGM all continue to deny causing any injury to G. They rely on the wider canvas as summarised above. Both Ms Wills-Goldingham and Mr Storey ask the court to give careful consideration to the question of whether G could have sustained birth related subdural bleeding. Undoubtedly, on the evidence of Mr Hogarth, G did have a chronic subdural haematoma with the potential therefore for re-bleeding. Factored into that is the evidence from Dr Saggat of the likelihood that G

has inherited hEDS. The court must ask whether the intraspinal bleeding is evidence of a separate injury or represents blood tracking from the subdural bleeding in G's head. It would be a mistake to assume that the constellation of features in this case must have a single unifying cause. The clinical symptoms relied upon are non-specific and there is no clear scanning evidence of brain injury. There is evidence that G had an elevated temperature on occasions which supports the existence of a separate medical cause, such as a virus, for G's clinical presentation. I am reminded that unknown cause is always an important issue for the court to consider.

83. A number of evidential factors are relied upon to support the proposition that inflicted or caused injury is simply improbable (even "ludicrous"). The parents were together in the house on 6 November just before G's clinical deterioration and the father only went downstairs briefly leaving the mother with R in the bathroom. They were together in bed just before G's clinical deterioration on 18 November. On both occasions the father could have easily alerted the mother had he needed her support for any reason. There is also the absence of other injuries. Had the father (or any adult) lost control sufficient to shake G or more than one occasion then they might have been expected to cause one or more additional injuries beyond subdural bleeding.
84. Mr Storey submits additionally that there has been an over focus on the father's mental health history, which verges upon prejudice. There is no evidence that the father has ever caused or threatened harm to another person. If he, or the mother, was someone prone to 'snap' under pressure, then the pressure of the last 14 months in the course of these proceedings would have been greater than anything that occurred in the first months of G's life. There is, he says, a great deal still to learn about EDS generally and hEDS in particular. The twitching, identified as seizures by the treating clinicians, may have an unrelated cause to the subdural bleeding or no identifiable cause. Prior to the scan results no doctor had identified a head injury as part of the differential diagnosis and absent those results they still may not have done.
85. On behalf of the MGM, Ms Crampton supports the submissions made on behalf of the parents. In any event, it is wholly implausible for the MGM to have been responsible for causing injury to G on 26 October and then another perpetrator be responsible for causing an injury or injuries on a later date or dates.

86. The Guardian has decided to play an active but neutral role in this hearing. At the conclusion of the evidence Mr Lamb did not advance a positive case on her behalf, but sought to provide the court with assistance in its analysis. If the local authority's case is correct then there must, he says, have been at least 2 episodes of injury (6 and 18 November) and probably at least 3 because membrane formation was unlikely to have occurred after only 12 days. He questions why the father did not disclose his full mental health history to the treating clinicians or to children's services when they were conducting their initial s.47 Children Act 1989 enquiries. If, on the expert evidence, subdural bleeding did not cause the clinical symptoms exhibited by G then he questions what did cause those symptoms. On the evidence of Mr Jayamohan one plausible explanation would be brain injury sufficient to cause symptoms (encephalopathy) but not sufficient to show up on the scanning images. There is no EEG finding to support identification for the cause of seizures and the clinical symptoms appear to have resolved with the change of carer.

Analysis

87. Cases involving alleged non-accidental head injury are always complex. This case is particularly difficult.
88. G was a large baby born by caesarean section but with the additional use of forceps to assist delivery. He appeared to be well initially, or mostly well, but his clinical condition deteriorated from about 26 October 2022. There were 4 hospital admissions: on 28 October, 31 October, 6 November and 18 November. On many, if not all, of those occasions G was seen to be unwell with vomiting and appeared pale and mottled in colour. His symptoms seemed to settle in hospital, but he did not revert to being entirely well. From just after birth the parents noticed G twitching and this became much more marked on 18 November. The clinical judgement in hospital on 18 November was that G was suffering from seizures. The impression of the treating clinicians before 18 November had been that G had gastroenteritis and also a viral infection. He had tested positive for parainfluenza on 6 November. He had a raised

temperature on 18 November and tested positive again for parainfluenza on 23 November. The CT and MRI scans on 18 and 19 November showed subdural bleeding of different ages and (according to Dr Hogarth) a small amount of bleeding in the intraspinal area. There was evidence of neo-membrane formation indicating a chronic subdural haematoma. His EEG was normal.

89. The research papers authored by Whitby and others (2004), Looney and others (2006) and Rooks and others (2008) established that babies are commonly born with asymptomatic subdural haematomas. Previously it had been thought that subdural haematomas were uncommon in term babies. These studies established not only that subdural bleeding was more common than thought following the birth process, but that they occurred after all forms of delivery. There is some discussion within the papers as to whether instrument led deliveries more commonly cause such bleeding. The exact mechanism as to how birth causes such bleeding is unknown and, indeed, there may be more than one potential mechanism to explain, for example, how normal caesarean births can also lead to asymptomatic bleeding. The papers conclude that such bleeding normally remains asymptomatic and resolves spontaneously within 1 month or, at the outside, 3 months. The sample numbers are, however, small so it is not possible to be certain that all birth related bleeding will spontaneously resolve within such a time frame.
90. It is common ground between all the experts in this case that they cannot exclude the possibility that, occasionally, a birth related subdural bleed will fail to resolve in the anticipated time frame and will become a chronic subdural haematoma. The process by which this is said to occur was described by Baker J (as he then was) at paragraph 49 of his judgment in *Re JS (a minor)* [2012] EWHC 1370 (Fam). As he said at paragraph 50, the growth of one or more chronic subdural haematomas is usually accompanied by expansion of the skull which in turn might well result in a growing head circumference reflected in a marked rise up the centile chart. In his evidence in this case Mr Jayamohan accepted that this growth may not be linear so there may be periods of reduction through absorption and then growth through re-bleeding.
91. In this case both Dr Hogarth and Mr Jayamohan are confident that they see a chronic subdural haematoma on the scans because they can see neo-membrane formation.

Such membranes are fragile so can re-bleed on minimal trauma or even spontaneously. Given the mixed appearance of the blood, it is impossible to date the original subdural bleed or to identify how many episodes of re-bleeding there had been. The original traumatic origin may date all the way back to birth.

92. Mr Hogarth in his evidence raised the potential that the process of development of an acute subdural haematoma into a chronic collection may initiate a wider inflammatory response leading to clinical symptoms. Mr Jayamohan and Dr Elias-Jones considered that to be unlikely and that ordinarily a chronic subdural haematoma would remain asymptomatic unless large enough to cause a pressure effect and / or raised intracranial pressure. In the absence of any signs of this, as in the present case, they considered that the clinical symptoms must have another cause.
93. All the experts agreed that a single explanation that could account for all the features of this case would be inflicted trauma. That trauma would most likely involve a shaking mechanism. There would have to be more than one episode of trauma to account for there being chronic and acute bleeding alongside the clinical symptoms noted. As set out below, it is more probable that there would need to be three or more episodes.
94. There were a number of small, but potentially significant, areas of disagreement between Dr Hogarth and Mr Jayamohan as to their interpretation of the scanning images. The first two are interrelated. Dr Hogarth interprets the images as showing a small slither of acute blood in G's intraspinal region. This could be further evidence to support the assertion of trauma as a unifying cause. He considers it to be possible, although less likely, that this is evidence of blood tracking down from the nearest site of injury, which would be behind the occipital lobe. He would be more confident of the tracking theory if there was blood in the posterior fossa or interhemispheric space. However, he acknowledged the limitations of the scanning images he had seen so there might be small deposits of blood between G's head and intraspinal area which would evidence blood having tracked along that route. Mr Jayamohan was not convinced there is in fact blood in the intraspinal area. He understands what Dr Hogarth is referring to, now it has been pointed out, but this was not something he saw himself when he first considered the images. Conversely, he can see blood in the

posterior fossa and the interhemispheric space so he is more confident as to the potential for tracking. He raised the enhanced potential for tracking given that G was on a ventilator prior to the scans having been undertaken.

95. Mr Jayamohan appropriately deferred to Mr Hogarth on the interpretation of the scanning images but, in my view, resolving the dispute between them is not that straightforward. Both are highly experienced experts well used to considering and debating the complex issues in these cases as well as undertaking highly specialised clinical work. If Mr Jayamohan is right, or even half right, the allegation of fresh trauma as a cause of intraspinal bleeding becomes much less compelling or not an issue at all. Even at its highest, Mr Hogarth readily conceded he could not rule out tracking as an explanation. Mr Jayamohan's clinical experience is important here particularly in relation to the potential for ventilation to cause or assist any tracking process.
96. The other difference between these experts was as to whether there is a small focal area of damage to G's brain substance in the parietal region of the right hemisphere. Dr Hogarth is clear he does not see this, although acknowledges that not all brain injury will be visible. Mr Jayamohan believes he does see it on the CT scan but that it has disappeared on the MRI scan. Whilst he had considered whether the brain injury might be the cause of G's left sided seizures, in the end the transient nature of that injury meant that he considered it to be more likely that it was a result of the seizure activity rather than the cause. As such, therefore, this issue is unlikely to be of assistance in resolving the primary issues in this case.
97. An obvious potential cause of the seizure activity seen, in particular, on 18 November would be trauma leading to damage to the brain substance whether seen or unseen on the scanning images. Otherwise, their cause is something of a mystery. There are many potential causes of childhood seizures to be placed into any differential diagnosis. Some may be transient. G did have a raised temperature on 18 November and 5 days later tested positive again for parainfluenza. Vomiting, feeding issues and being pale or mottled in colour again may have a range of causes. However, Mr Jayamohan and Dr Elias-Jones were troubled by the clinical symptoms and their potential cause if not a result of trauma. They were also troubled about the lack of any

increase in G's head circumference and that the symptoms had largely or wholly resolved with the change of primary carer.

98. The clinical and medical findings in this case have to be considered in the context of a child who is likely to have hEDS (formally known as EDS Type III). Dr Saggar's conclusion, having examined G and having considered the medical history of the parents, is that G probably has inherited this. EDS is a disorder of the connective tissues. Collagen is a connective tissue and a major component of the blood vessel walls. hEDS affects capillaries and smaller veins and may predispose someone to easy bleeding and bruising. There have been no studies to consider the impact of hEDS on the likelihood of or progression of birth related subdural bleeding. Any impact, therefore, on the formation of a chronic haematoma or propensity to re-bleed is simply unknown. All that can be said as a matter really of logic and common sense is that it may have some impact.
99. I remind myself that my task is to survey all of the evidence. Ultimately the responsibility for decision making rests with the court and there are no easy or risk-free solutions. Getting it wrong, either way, may have profound implications for these children and their wider family.
100. The absence of evidence of other injuries, beyond subdural haematomas, is important in this case as it has been in others that I am familiar with and have been cited to me in submissions. The list of injuries which might be seen as a result of an episode of shaking is extensive and includes retinal haemorrhaging, fractures to the ribs, metaphyseal limb-fractures, bruising and ligamentous damage to the cranio-cervical junction. It also includes injury to the brain substance of which there is no evidence beyond the transient damage which Mr Jayamohan believes he can see but discounts as an effect of seizures rather than a cause. If, as the local authority alleges, there were episodes of injury shortly before G's hospital admissions on 6 and 18 November then these are unlikely to explain the presence of neo-membrane formation which would require at least one earlier episode of injury. So that would mean at least three episodes of shaking which caused no injury beyond the subdural bleeding. That seems to me to be unlikely where the trigger in an otherwise loving parent is said to be a loss of control.

101. The wider canvas is also important. As set out above, there are no markers in this case to suggest that these parents, or the MGM, would be capable or likely to cause injury to a very young baby on multiple occasions. They have impressed all the professionals that have worked with them. They have co-operated fully with the process, despite how hard that must have been for them. Mr Storey is right to point out that if anyone has a propensity to lose their temper or control then 14 months of local authority intervention and complex court proceedings would be likely to test that to the limit. Each has remained calm and dignified despite the challenges.
102. It is understandable why the local authority and Guardian have wished to explore with the father (and with other family members) the father's mental health history. There have certainly been times when he has struggled both before meeting the mother and also after R was born. However, the inferences that it is appropriate to draw from his history are limited. The court must be careful not to allow an inquiry looking to establish propensity to become prejudicial or even discriminatory. There is no evidence of the father causing harm to anyone other than himself or threatening to do so. There is no evidence of loss of temper or control. There is no suggestion that he has harmed anyone in the past, let alone a young baby. He has been open to the court about his history. He has sought appropriate help and treatment when needed. He tells me he has developed an increased sense of awareness of his own mental health, the triggers to any deterioration and the steps he needs to take when he feels there to be a deterioration. He described becoming an advocate for mental health awareness in his own workplace during the covid pandemic. I ask myself why I should not believe him when he tells me that he would never let his mental health deteriorate to the extent that he would harm someone he loves.
103. I have heard the mother, father, MGM and other extended maternal family members give evidence. I was impressed by each of them. Their sense of family and their love for each other was palpable. I did not get the impression that any of them were trying to deceive me or the other professionals in this case. I do not think there is anything in the point that the parents did not provide complete details of the father's mental health history until he provided his statement in these proceedings.

104. I heard evidence from the mother and watched her throughout 9 days of court hearings. As I have said above, I found her to be a compelling witness. It seems inconceivable to me that she would harm G or would lie or minimise to protect the father from such an accusation.
105. I heard evidence from the father and again watched him throughout the hearing. He was an impressive witness. He came across as gentle and calm. For him to have harmed G he would have needed to have done so against his own character on multiple occasions. I heard him describe going downstairs with G on 6 November. There did not appear to be anything inappropriate in the way he was carrying G. He was only away from the mother for a very short period of time with her remaining in the bathroom bathing R. If he needed the mother's help he could have asked for it. Neither describes any particular stress, tension, argument or anger having occurred. It was just a normal day. G had been difficult that day but babies are difficult sometimes and these were not first time parents. I ask myself whether it is likely that the father would have shaken G when downstairs when there was no particular reason for him to do so. I do not think that it is.
106. Equally, there appears to be no particular reason for the father to shake G in the early morning of 18 November. The mother was next to him in bed. He could have asked her for help if he was struggling. She struck me as someone who would willingly be called into action to help if she was needed. Again, I ask myself whether it is likely that the father would have shaken G that morning and done so when in bed with the mother without her noticing. Again, I do not think that it is.
107. At the conclusion of the case, as I have said, no party advanced a positive case against the MGM. Even if they had, I would have rejected the proposition that she had harmed G or there was a realistic possibility of her having done so. My impression of her, as with the parents, was wholly positive. There did not appear to me to be anything inappropriate in the walk with G in the pram on 26 October. I cannot see her having harmed G by shaking him and, in any event, on the expert evidence such an assault would need to be accompanied by further assaults by someone else on later occasions.

108. I find myself in the position, as described by judges in a number of the published cases, of being unwilling to make findings of culpability against these parents and / or MGM unless compelled by the other evidence, including the expert evidence, to do so. None of the experts in this case were willing to rule out natural cause. Dr Hogarth went further and said that he was unwilling to say it was more likely than not that this was inflicted injury. All the experts readily conceded there are limits to our understanding of the complex medical issues that arise in this case.
109. I readily acknowledge, as I have throughout this judgment, that there are elements to this case that do not fit easily with a naturally evolving birth related subdural bleed. In particular, there are the clinical symptoms which are likely, on the evidence of Mr Jayamohan and Dr Elias-Jones, to have a different cause. It is a puzzle as to why G's clinical symptoms appear to have resolved with the change of primary carer. There is a question as to whether what the parents describe as a high-pitched scream on 6 November 2022 is evidence of a neurological event. However, the court has to be cautious about ascribing too much (or even decisive) weight to a single piece of evidence. In complex cases of this nature, it may not always be possible to find an answer to every question or resolve every part of the evidential puzzle. Medical knowledge and understanding do not always permit easy answers or indeed any answers. We know more now than we did before the research undertaken into birth related subdural bleeding and we know more about hEDS. However, there is still much to learn. In any event, there is a danger in looking for a single unified explanation when there may be a number of factors operating independently to create the clinical picture and medical findings.
110. The primary question for me is whether I am satisfied on the balance of probabilities that G sustained non-accidental shaking injuries. For the reasons given above I am not persuaded that this is what happened to G. Accordingly, the local authority has not discharged the burden of proving that G sustained significant harm attributable to the care of a parent or other carer within the meaning of s.31 Children Act 1989.

Postscript

111. The MGM was represented before me pro bono by Ms Crampton. This instruction was arranged through Advocate. This is a charity set up through the Bar Council to assist members of the public who need free legal help. It is wholly dependent on barristers agreeing to give up their professional time for free and is dependent on charitable donations to meet its running costs. Inevitably demand outstrips supply. In this case Ms Crampton gave up 11 days of her professional time (and additional time no doubt for preparation) to represent the MGM. I commend her for doing so. I am told that others have acted in a similarly generous way in other long cases. However, this would not be necessary if legal aid was available for a grandparent facing allegations in public law proceedings in the same way as it is for a parent. I understand that means testing meant that the MGM was not eligible for legal aid funding and would have had to sell her home to afford to pay for representation. Many grandparents (and other carers alleged to have injured children) find themselves appearing before the court in complex cases of this nature unrepresented. The consequences of findings being made against them can be life changing.