Neutral Citation Number: [2019] EWHC 3887 (Fam)

Case No: NE18C00441

IN THE HIGH COURT OF JUSTICE
FAMILY DIVISION
SITTING AT NEWCASTLE FAMILY COURT

Date: 22/11/2019

Before:

MR JUSTICE WILLIAMS

- -

Between:

	Sunderland City Council **Through its Agent 'Together for Children'**	**Applicant**
	- and -	
	A **-and -** **B**	**1st Respondent** **2nd Respondent**
	- and - **The child** **(By her Children's Guardian)**	**3rd Respondent**
	(Re-hearing: Fact-Finding: Expert or Professional Evidence)	

- -

Ms Penny Howe QC and Ms Lindsay Webster for the **Applicant**
Ms Barbara Connolly QC and Mr Harvey Murray (instructed by **Richard Reed & Co.**) for the **1st Respondent**
Mr Nicholas Stonor QC and Mr Stephen Ainsley (instructed by **Ward Hadadway**) for the **2nd Respondent**
Mr Clive Newton QC and Mr Justin Gray (instructed by **Cafcass**) for the **3rd Respondent**

Hearing dates: 18th - 22nd November 2019

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Approved Judgment

I direct that pursuant to FPR PD 27.9 no official shorthand note shall be taken of this Judgment and that copies of this version as handed down may be treated as authentic.

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MR JUSTICE WILLIAMS

This judgment was delivered in private. The judge has given leave for this version of the judgment to be published. The anonymity of the children and members of their family 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.

Mr Justice Williams :

Introduction

1. On 1 June 2018 C (born 06/12/17), who was nearly 6 months old, was taken to hospital by her parents and maternal grandparents. On admission she was found to have widespread petechiae over her face, head and the right side of her neck together with some swelling around her eyes and two sub- conjunctival haemorrhages (pinpoint petechiae) in her eyes. The treating team were concerned that one possible cause of the petechiae was (in broad terms) suffocation. Over the coming days the treating team concluded that the most probable explanation of the petechiae was a suffocation event. Care proceedings were commenced by the local authority on 13 June 2018.

2. On 27 February 2019 HHJ Hudson gave judgment in those proceedings. She found that the petechial haemorrhages were inflicted injuries caused by the father. On 16 July 2019 the Court of Appeal allowed the father's appeal against that finding and remitted the application for rehearing.

3. It is that rehearing that I have been undertaking over the previous five days.

4. The local authority have been represented by Penny Howe QC and Lindsay Webster. The mother has been represented by Barbara Connolly QC and Harvey Murray. The father is represented by Nicholas Stonor QC and Stephen Ainsley. C herself has been represented by Clive Newton QC and Justin Gray.

The Issues

5. In their judgment, the Court of Appeal acknowledged that the case was a very difficult one and observed that the medical evidence was difficult to summarise as a result of the process by which it had been obtained. That evidence has now been further added to not only by additional reports obtained from the three long-standing medical witnesses but also by their oral evidence and additional reports from a consultant in paediatric immunology and infectious diseases and another treating paediatrician. As will become clear later in this judgment, the task of summarising the effect of the medical evidence has remained a difficult one, that difficulty being compounded by shifts either of emphasis or of substance in the opinions expressed. I have had five clear days in which to hear this case. HHJ Hudson did not have even that relatively tight allocation of time in which to determine the case and grappling with the complex medical and other evidence under immense pressure of time is an unenviable task. Regrettably with the pressures on the family justice system created by the ever-increasing workload, that situation is all too common and it is largely down to the efforts of busy circuit judges and district judges up and down the country that the family justice system continues to operate as well as it does.

6. The basis on which the Court of Appeal allowed the father's appeal was

> *'[125] ...the judge appears to have misstated Dr Flowers' evidence that she "now favours a combination of smothering/suffocation and chest compression as the probable cause". Absent such evidence, the judge's later conclusion that "it most likely involved some form of compression and suffocation or smothering" is unsupported by the evidence.*

7. The Court of Appeal declined to substitute their own finding that the threshold was not established because they did not consider that the medical evidence was

sufficiently clear in either direction and particularly referred to the need to consider the medical evidence which pointed against inflicted injuries and the need for the decision on threshold to be taken in the context of all of the evidence not just the medical evidence.

8. As a result of the setting aside of the finding the view was taken that the remitted hearing should revisit both of the parents as possible perpetrators.

9. The original threshold asserted that the injuries occurred whilst C was in the overall care of her parents; the injuries have not been adequately explained; the most likely mechanism will have involved compression by third party; the injuries were caused by M and/or F and are inflicted injuries. The court is invited to identify the perpetrator if at all possible.

10. Both of the parents responded in a similar way, accepting that C had presented with the conditions identified but denying they were injuries; denying that either of them had subjected C to a compression event and denying that they caused any injury to C or that they had any information as to the other or anyone else doing so.

11. The issues identified at the IRH before me were set out as follows:

    i) Has C suffered inflicted injury in the form of:

        a) A mechanical incident giving rise to a pattern of petechiae on her face and head together with periorbital swelling on 1 June 2018?

        b) If so, who was the perpetrator of injury to C?

        c) What, if any, knowledge did the other parent have of injury having been inflicted upon C, or should they reasonably have had in the circumstances? Should they have acted differently?

12. Thus the essential question for me is whether the local authority can prove that the petechial haemorrhages were caused by an assault upon C by the mother or the father.

<u>This Hearing</u>

13. I was provided with four lever arch files of documents in advance of the hearing commencing and I have been able to read a considerable part of that, in particular the essential reading identified.

14. I was provided with position statements by all parties.

15. In the course of the hearing further evidence was filed with the court including;

    i) The medical report of Dr Abinun

    ii) The medical report of Dr Mellon

    iii) The missing medical notes covering 3 June 2018

    iv) Colour photographs taken by the parents both on the day and subsequently of rashes.

    v) Extracts from the mother's Facebook messenger account from the period immediately after the petechial haemorrhages appeared

    vi) I have seen photographs of the changing mat and poof on which C was changed

vii) Further medical notes a printout from the police outlining calls made by the mother in the immediate aftermath

16. During the hearing I heard evidence from:

i) Dr Abinun

ii) Dr Mecrow

iii) Dr Flowers

iv) Dr Bolton

v) The mother

vi) The father.

17. I have had the considerable benefit of focused and robust questioning of all of the witnesses by leading counsel together, with the assistance of their submissions. The industry of the teams in preparing for and presenting this case has been both impressive and of considerable assistance to me. The parents have behaved appropriately throughout demonstrating dignity and composure in the most stressful circumstances. I would like to extend my thanks to all concerned who have assisted me in determining this most difficult case. I regret the length of this judgment including the schedules but the complexity ultimately made it unavoidable.

The Parties' Positions: A Summary

18. Each of the parties submitted position statements at the commencement of the case and following the completion of the evidence made oral submissions; complemented in the case of the father and the Guardian by brief written notes. In this summary I cannot fully reflect the detailed nature of the submissions made but aim to encapsulate the principal lines of argument advanced.

Local Authority

19. The effect of the evidence heard over the course of the trial did not point to the mother as being a probable perpetrator, and Ms Howe's cross examination of the mother was almost wholly focused on issues connected with the likelihood of the father being the perpetrator. The case that the mother may have harmed C was put to her as both an afterthought and a formality, but the local authority did not alter their formal position in respect of the threshold by inviting me to exclude her from the evaluation.

20. Ms Howe's position was that the local authority adopted an essentially inquisitorial position rather than a prosecutorial role but they submitted the evidence established on the balance of probabilities that the father inflicted the petechial haemorrhages on C as a result of assaulting her by either an act of compressing her chest and placing something over her mouth and nose or by some other alternative means of attempted asphyxiation. The local authority acknowledged that such an act may (and more likely was) an act carried out in frustration rather than in venom, postulating that the father's upset at C's frequent rejection of him and her crying for her mother whilst he changed her nappy was the most likely explanation for him having snapped out of frustration. They postulated that in attempting to make her be quiet and stop objecting to him changing her nappy, he pressed down on her chest and face using such force that he came close to asphyxiating her and as a result causing the petechial haemorrhaging.

21. Ms Howe argues that the medical evidence supports the finding of inflicted injury for the following essential reasons;

i) accidental self asphyxiation can pretty much be ruled out. Dr Bolton's evidence was that this typically was associated with a child becoming stuck between cot bars or some other mechanism which they were unable to extricate themselves from. C rolling over and pushing her head into the lining of the Moses basket even if accompanied by her arm being trapped under her head covering her nose and mouth was most unlikely to create the conditions in in which the petechial haemorrhages could be sustained alongside the sparing. Although she could not rule it out completely it was only on the basis that one can rarely be 100% certain. In any event the father said C was on her back with her face upwards when he went to get her and neither parent heard anything of concern over the baby monitor whilst C was asleep upstairs. The mother is very child focused and the father was also present so the likelihood of C suffering an event which would very probably have been followed by significant distress and this going unnoticed is unlikely.

ii) None of the other mechanisms of prolonged vomiting or coughing or sneezing were evidenced by anything the parents reported and the experts had considered they were most unlikely.

iii) An infection-related or immunological cause can also 75% be ruled out on the basis of Dr Abinun's opinion. That is based on the absence of the clinical features identified by Serra and Moura Garcia C et al 2015. Although some mild oedema and petechiae were present, there was no fever and nor did the petechiae develop over 24 to 48 hours into purpuric target shaped lesions. It is acknowledged that Dr Abinun accepted there was a lot in medical science in relation to immunological and infectious effect on the skin that was not known. The rash noted on 3 June 2018 is poorly documented and could be linked to hand foot and mouth. The gunge in the eye was said by Dr Mecrow to be weakly supportive of infection but he had also said it might simply be sleep. The period of time the petechiae took to resolve was said to be more consistent with an organic cause but Dr Bolton made clear that individuals differ in how long it takes to resolve.

iv) In relation to mechanical means of causation Dr Mecrow did not offer an expert opinion on it. If he had one chance to create the petechial haemorrhaging it would be by compressing the chest. Dr Bolton [E302] said she certainly cannot exclude what Dr Flowers had said or say that she was unreasonable in coming to that conclusion; even at that time she was close to saying it was inflicted on the balance of probabilities. In her oral evidence she explained why she now was of the opinion that it was more probable than not to have been inflicted; part of this was that she now understood from the parents' evidence that C had been significantly distressed at the relevant time.

v) She explained that it was common in pathology to be unable to determine the precise mechanism by which an injury was inflicted. In the field of family law, it is common for the court to be confronted with for instance a bruise but not to know the implement which inflicted it.

vi) She was able to postulate a mechanism which came very close to being able to completely explain the combination of distinct petechial haemorrhages and extensive sparing. The combination of chest compression together with a hand possibly holding something over the nose and mouth, pushing the head into the soft changing mat and pouffe did this.

vii) If one accepts that the sparing must arise from a mechanical act as postulated by Dr Bolton, one must also accept that the petechiae arose from a mechanical compression. If that is so it is an inflicted injury.

viii) The timeframe within which it might have been inflicted could be as little as 15 seconds and even that lower parameter derives from the evidence [E308] relating to strangulation rather than chest compression and so it might have been less.

22. In relation to the wider evidential picture Ms Howe emphasised that:

i) Although the evidence about the mother is consistent in depicting her as a loving caring mother the nature of her relationship with the father is such that she is unable objectively to assess what he may have done. Her evidence about him was guarded.

ii) The father's evidence was harder to assess in credibility terms. It is plain that he struggled with having developed a powerful attachment with C in the four weeks immediately after her birth and losing that. He described it as addictive and that could be an important distinction as between his situation and that of the average parent in his situation. His evidence about his dishonesty over his cannabis use gives rise to real concern both that he was not honest but more importantly that he ceased cannabis use for a week in order to try to manipulate any testing that was undertaken by police. If he is prepared to seek to mislead in this calculated way he may be doing so in other ways.

<u>The Mother</u>

23. Ms Connolly emphasised that notwithstanding the way the evidence had developed which tended to absolve the mother of any responsibility, the local authority had not withdrawn her from the threshold. In any event she has a significant interest in the outcome for C and the father and the wider family irrespective of her own interest. In submitting that I should conclude that the evidence could not support a finding on the balance of probabilities that the father had inflicted injuries on C still less the mother, Ms Connolly relied on the following points:

i) There must be real concern about how Dr Flowers came to reach her initial opinion. It was that of the treating clinician seeking to establish a cause in order to inform the treatment of the patient. It was not reached in the detached objective way of an independent expert. She was unaware of the non-blanching rash that was noted on 3 June and became fixated on infliction. The nature of the peer review makes the supposedly nine supporting clinicians valueless.

ii) Dr Bolton's expertise is the dead not the living and her particular focus is to look at matters when a medical condition is excluded. This means she is particularly focused on finding an inflicted mechanism rather than taking a bigger picture. She accepted nothing fits completely – she said she has never seen the intensity of the petechiae or the sparing. From a pathological perspective it was exceptional – none of her colleagues had seen anything like it.

iii) None of the mechanisms considered works; strangulation would lead to neck injuries and doesn't explain the sparing; chest compression one would expect petechiae lower down onto the chest;

iv) The duration of the petechiae is more consistent with an infection or immunological cause and 3rd June rash is important. It was reviewed by a nurse and doctor and it was non-blanching like the 1st rather than the blanching like the 5th June.

v) Dr Bolton's opinion and that of the others were focused on sparing but even then, they had not fully appreciated the full extent of the sparing; the neck, the cheek the area around the ears. No proposed mechanism could explain this.

vi) In a case such as this where there is no accepted or well understood mechanism for causing this sort of injury there has to be a link between finding a precise mechanism and the conclusion that it is inflicted. How can one properly reach the conclusion that it is inflicted if one cannot explain in such unusual circumstances the precise mechanism which explains the actual injury?

vii) In relation to Vasculitis or AHEI, both Dr Mecrow and Dr Abunin acknowledged that the rash on 3 June supports in some way an ongoing infective process – which could have originated sometime before the petechiae formed. Dr Abunin said this is a condition which is rare – 300 cases in 100 years and that a classic pattern hard to define. He also said that, 'we don't know why it is limited in its extent in a target rash' illustrating the uncertainty in relation to how such rashes are generated. At a 75%/25% balance of probabilities AHEI is not fanciful.

viii) In relation to the mother and the father, they have lied about cannabis but also been very frank. It seems to be accepted that she and the family are close and they have worked hard to put C first. That is not someone who would be prepared to overlook the potential role the father might have played.

<u>The Father</u>

24. Mr Stonor adopted Ms Connolly's submissions but he made the following additional submissions.

i) As noted by McFarlane J (as he then was) there is a significant difference between a momentary loss of control and smothering which involves deliberate or at least conscious activity rather than a momentary flareup. Smothering to the extent of collapse should be regarded as at the furthest end of the spectrum of probability. Mr Stonor clarified that he was not suggesting that there was some heightened burden of proof but rather that in assessing the likelihood overall the court should acknowledge that serious assaults of the sort contemplated by the local authority were by their nature highly improbable acts by a loving parent.

ii) The Court of Appeal made clear at paragraphs 110 and 127 that mechanism and causation are inexorably linked. The doctors themselves recognised this [E267, E196, E307] which was part of the rationale for them not being able to conclude on a balance of probabilities that this was inflicted injury. If a plausible mechanism cannot be identified that adds to the list of improbabilities when considering inflicted cause. A distinction should be made between those types of injuries such as bruising or shaking injuries where there is well established evidence as to how they are caused and the link with infliction and the situation here.

iii) A number of key factors militate against inflicted injury:

a) The pattern of sparing where both Dr Mecrow and Dr Bolton said the pattern didn't seem to fit into any mechanism of pressure being applied

b) The intensity of the petechiae on the back of the head was inconsistent with pressure being pushed on the front of the head and the back of the head being pressed against a surface or vice versa. Dr Bolton's oral evidence about the dissipation of pressure by the back of the head on a soft surface was confusing as was her explanation which involved both the head having a flat back and a round back.

c) The number of petechiae was unusual for someone without injuries to their neck according to Dr Bolton

d) The petechiae were visible for five days, a duration which Dr Bolton said was highly unusual and more in keeping with an ongoing process. She said she had never before seen petechiae last for five days a case of inflicted injury

e) There were no other injuries for instance a torn frenulum, petechiae on the chest and above all significant conjunctival haemorrhages.

iv) In relation to Dr Abinun his report made clear that the available research on Acute Haemorrhagic Edema of Infancy was limited and thus there was a need for caution when considering classic features. He said it was underreported and a mimic of non-accidental injury. He said C's presentation showed some of the features recognised as consistent with AHEI and that a single occurrence was usual. The immunisations on 27 April might have been a trigger although it was a bit long. The only way of confirming a skin infection was a skin biopsy which had not been carried out. He also identified the 3 June rash as a possible link to a viral infection. He was very frank in saying that there were quite a lot of areas which we did not know about skin reactions and did not know the underlying cause. He said the term idiopathic itself meant its cause was unknown.

v) Dr Mecrow's evidence was balanced and measured. He was prepared to accept alternative explanations. He was clear that because of the lack of experience of the condition either in research or in his clinical practice it is difficult to prefer one cause over another. He thought the evidence from Dr Abinun of a 25% chance that the rash was AHEI lent support to his scenario of a medical condition not yet identified or fully understood. Likewise the non-blanching rash. The later developments in relation to C in terms of the brief resolved unexplained event (BRUE) and her ongoing allergy or dermatological conditions he thought illustrated there was much that was not yet understood about C.

vi) Dr Flowers is not an expert witness. Mr Stonor accepted she was capable of giving expert evidence and this went to weight. She is significantly less experienced than Dr Mecrow. She adopted a linear process where in the absence of a plausible medical explanation she assumed it was an inflicted injury which risked reversing the burden of proof. Although she moderated her opinions from the experts meeting onwards she still lacked the balance of Dr Mecrow.

vii) Dr Bolton's shift of position was surprising and she was unable to give any real explanation for it. At one stage she was saying the situation left more questions than she had answers for [E166] and the additional evidence one

would have thought would give rise to more questions. In her own pathologists field in dealing with children who have experienced accidental neck pressure, smothering's, strangulation's and chest compression she had not seen what she saw in C [E307] and her move from a position where she clearly said in the experts meeting that she couldn't say even on balance this was something that had been done to C through to concluding it was more likely than not inflicted was not supported by any change. The matters she relied upon were all in play at the time of the experts meeting.

viii) The wider canvas shows it is improbable that this father would smother/compress his child; there are no prior indications of violence to any person let alone his child; no reported upset, anger or mental health difficulty; no evidence he was under the influence of either alcohol or drugs indeed evidence he was not; nothing out of the ordinary in his presentation that day; nothing that the mother saw heard which caused her concern; he immediately sought to the attention of the mother; he supported the mother in seeking immediate advice.

The Guardian

25. On behalf of the Guardian Mr Newton noted that whilst the Guardian remained essentially neutral, he accepted that the evidence in relation to the mother made it difficult to see her as a possible perpetrator. In seeking to assist the court from a neutral perspective Mr Newton made the following points:

i) Whilst appropriate attention must be paid to the opinion of medical experts the court is not bound by them. Even where medical evidence is that the likely cause is non-accidental the court can conclude on the balance of probabilities that an injury has a natural cause or is not a non-accidental injury or that the local authority has not established the existence of the threshold to the necessary standard. A County Council-v-K, D, L [2005] EWHC 144 (Fam)

ii) In this case two of the three principal medical witnesses have changed their opinions over the history of the case. The court's ability to reach a different conclusion to the medical evidence is emphasised.

iii) Four conditions must be satisfied before a lie can be seen as corroborating an allegation made. It must be deliberate; it must be material; the motive; the statement must be clearly shown to be a lie.

iv) The absence of a parental explanation must not be used to support a malevolent explanation. This is to reverse the burden of proof.

v) The evidence of a treating doctor can justify giving it different weight. Their personal relationship with the parents and the child; the need to make decisions to treat, the early development of an opinion; may all make that opinion less reliable than that of an independent expert.

vi) The court must consider the possible causes of the petechiae and the possible causes of the sparing. The medical witnesses said the swelling to the eyes was not of assistance in understanding what had happened as it could arise from crying.

vii) The experts agree that the possible causes of the petechiae that cannot be excluded are:

a) Via the process of rise in venous pressure in the blood vessels: Cough; Sneezing; Accidental self-infliction; Abusive infliction; Unknown cause;

b) Via the process of vasculitis; Infection; AHEI, Unknown cause.

viii) The expert evidence provides two explanations for the sparing:

a) Pressure applied to the spared areas simultaneously with the event causing the petechiae; this is principally the theory of doctors Bolton and Flowers but now Dr Mecrow has also accepted this.

b) Natural biological variation of tissue. This is principally Dr Mecrow's theory although Dr Bolton accepts some tissues are more susceptible to petechiae (unsupported tissues) than other supported tissues.

ix) The court should prefer the theory of Dr Bolton and Dr Flowers in particular given Dr Bolton's unrivalled experience in tissue dissection and Dr Mecrow's acceptance that his theory is speculation. The important consequence of the court accepting this is that in order to cause the petechial haemorrhages and the sparing there must be two applications of pressure; one to the chest and one to the head and face. This could be inflicted or accidental.

x) The experts have found it difficult to identify a mechanism which would explain the sparing.

xi) However the sparing is unexplained in relation to any of the potential causes of the petechial haemorrhages.

xii) In respect of each of the potential causes there are difficulties; there are supporting issues and issues which undermine that possibility.

a) Cough or sneezing; there is no parental history reporting this. It is therefore unlikely

b) Accidental self infliction; it requires C to have put herself in a position to cause a rise in venous pressure and simultaneously a pressure on most of the spared areas without distress being noticed. This is very unlikely.

c) Abusive infliction: it requires a mechanism sufficient to cause the rise in venous pressure but without causing the other injuries or marks that would usually be expected. It also involves a mechanism which the experts have been unable to satisfactorily explain. The abnormal crying during the nappy change may be a supporting factor of an abusive infliction. The paediatricians were clear that mechanical infliction would have been accompanied with significant distress. Several mechanisms were considered possible by the experts; chest compression; strangulation; suffocation; or smothering. Dr Bolton now considers chest compression and smothering to be the cause on the balance of probabilities. Dr Flowers favours smothering or suffocation (albeit not on balance of probabilities. Dr Mecrow considered smothering via chest compression the least unlikely.

d) The difficulties with infection being the cause are there is no evidence of her having an infection on 1 June and 3 June rash cannot clearly be

linked. Nor does an infection fit with C being distressed. The rash of 5 June is irrelevant. AHEI is considered by Dr Abinun to be unlikely.

The Legal Framework

Threshold

26. In order to make a care or any public law order the Local Authority must prove that the situation justifies the intervention of the State. This means that the Local Authority must establish the statutory threshold set out in s.31(2) Children Act 1989.

> *(2) A court may only make a care order or supervision order if it is satisfied –*
> *(a)that the child concerned is suffering, or is likely to suffer, significant harm; and*
> *(b)that the harm, or likelihood of harm, is attributable to –*
> *(i)the care given to the child, or likely to be given to him if the order were not made, not being what it would be reasonable to expect a parent to give to him; or*
> *(ii)the child's being beyond parental control.*

27. The relevant date is 1 June 2018.

The burden and standard of proof

28. The Threshold is established by proving facts which establish the child is suffering significant harm and that the harm is attributable to the care given not being what it would be reasonable to expect a parent to give to him. In respect of the task of determining whether the 'facts' have been proven the following points must be borne in mind as referred to in the guidance given by Baker J (as he then was) in Re L and M (Children) [2013] EWHC 1569 (Fam) confirmed by the President of the Family Division in In the Matter of X (Children) (No 3) [2015] EWHC 3651 at paragraphs 20 – 24. See also the judgment of Lord Justice Aikens in Re J and Re A (A Child) (No 2) [2011] EWCA Civ 12, [2011] 1 FCR 141, para 26

29. The burden of proof is on the Local Authority. It is for the Local Authority to satisfy the court, on the balance of probabilities, that it has made out its case in relation to disputed facts. The parents have to prove nothing and the court must be careful to ensure that it does not reverse the burden of proof. As Mostyn J said in Lancashire v R 2013] EWHC 3064 (Fam), there is no pseudo-burden upon a parent to come up with alternative explanations [paragraph 8(vi)].

30. The standard to which the Local Authority must satisfy the court is the simple balance of probabilities. The inherent probability or improbability of an event remains a matter to be taken into account when weighing probabilities and deciding whether, on balance, the event occurred [Re B (Care Proceedings: Standard of Proof) [2008] UKHL 35 at paragraph 15]. Within this context, there is no room for a finding by the court that something might have happened. The court may decide that it did or that it did not [Re B at paragraph 2]. If a matter is not proved to have happened I approach the case on the basis that it did not happen.

31. Findings of fact must be based on evidence, and the inferences that can properly be drawn from the evidence, and not on speculation or suspicion. The decision about whether the facts in issue have been proved to the requisite standard must be based on all of the available evidence and should have regard to the wide context of social, emotional, ethical and moral factors [A County Council v A Mother, A Father and X, Y and Z [2005] EWHC 31 (Fam)].

32. The court is not limited to considering the expert evidence alone. Rather, it must take account of a wide range of matters which include the expert evidence but also include, for example, its assessment of the credibility of the witnesses and the inferences that can properly be drawn from the evidence. The court must take into account all the evidence and furthermore consider each piece of evidence in the context of all the other evidence. The court invariably surveys a wide canvas. A judge in these difficult cases must have regard to the relevance of each piece of evidence to other evidence and to exercise an overview of the totality of the evidence in order to come to a conclusion.

33. Thus, the opinions of medical experts need to be considered in the context of all of the other evidence. While appropriate attention must be paid to the opinion of medical experts, those opinions need to be considered in the context of all the other evidence. It is important to remember that the roles of the court and the expert are distinct and it is the court that is in the position to weigh up the expert evidence against its findings on the other evidence. It is the judge who makes the final decision. Cases involving an allegation of non-accidental injury often involve a multi-disciplinary analysis of the medical information conducted by a group of specialists, each bringing their own expertise to bear on the problem. 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.

34. When considering the medical evidence in cases where there is a disputed aetiology giving rise to significant harm, the court must bear in mind, to the extent appropriate in each case, the possibility of the unknown cause [R v Henderson and Butler and Others [2010] EWCA Crim 126 and Re R (Care Proceedings: Causation) [2011] EWHC 1715 (Fam)].

> *"Today's medical certainty may be discarded by the next generation of experts. Scientific research may throw a light into corners that are at present dark. That affects neither the burden nor the standard of proof. It is simply a factor to be taken into account in deciding whether the causation advanced by the one shouldering the burden of proof is established on the balance of probabilities."*

35. The evidence of the parents and of any other carers is of the utmost importance. It is essential that the court forms a clear assessment of their credibility and reliability. They must have the fullest opportunity to take part in the hearing and the court is likely to place considerable weight on the evidence and the impression it forms of them. [Re W and Another (Non-Accidental Injury) [2003] FCR 346]. In assessing the credibility of a witness of fact one must bear in mind that performance in the witness box is only one component of the evaluation of their credibility and care should be taken in evaluating the 'impression' a witness makes in particular in interpreting body language. Some people are convincing liars. Others are anxious tellers of the truth. The assessment of credibility must take account of the consistency of a witnesses account internally and over time, its consistency with known facts, how it compares with the evidence of other witnesses, particularly independent witnesses, the character of the witness and how their evidence is given.

36. It is always desirable, where possible, for the perpetrator of non-accidental injury to be identified both in the public interest and in the interest of the child. The Court of Appeal has recently considered the law where only two possible perpetrators are identified. In Re B (a child) [2018] EWCA Civ 2127 Lord Justice Peter Jackson said,

> *[19] The proper approach to cases where injury has undoubtedly been inflicted and where there are several possible perpetrators is clear and applies as much to those cases where there are only two possible candidates as to those where there*

are more. The court first considers whether there is sufficient evidence to identify a perpetrator on the balance of probabilities; if there is not, it goes on to consider in relation to each candidate whether there is a real possibility that they might have caused the injury and excludes those of which this cannot be said: North Yorkshire County Council v SA [2003] EWCA Civ 839, per Dame Elizabeth Butler-Sloss P at [26].

[20] Even where there are only two possible perpetrators, there will be cases where a judge remains genuinely uncertain at the end of a fact-finding hearing and cannot identify the person responsible on the balance of probabilities. The court should not strain to identify a perpetrator in such circumstances: Re D (Care Proceedings: Preliminary Hearing) [2009] EWCA Civ 472 at [12].

[21] In what Mr Geekie described as a simple binary case like the present one, the identification of one person as the perpetrator on the balance of probabilities carries the logical corollary that the second person must be excluded. However, the correct legal approach is to survey the evidence as a whole as it relates to each individual in order to arrive at a conclusion about whether the allegation has been made out in relation to one or other on a balance of probability. Evidentially, this will involve considering the individuals separately and together, and no doubt comparing the probabilities in respect of each of them. However, in the end the court must still ask itself the right question, which is not "who is the more likely?" but "does the evidence establish that this individual probably caused this injury?" In a case where there are more than two possible perpetrators, there are clear dangers in identifying an individual simply because they are the likeliest candidate, as this could lead to an identification on evidence that fell short of a probability. Although the danger does not arise in this form where there are only two possible perpetrators, the correct question is the same, if only to avoid the risk of an incorrect identification being made by a linear process of exclusion.

37. When looking at how best to protect child and provide for his future, the judge will have to consider the strength of that possibility as part of the overall circumstances of the case [Re S-B (Children) at paragraph 43].

38. When considering the petechial haemorrhages the correct question is not whether it is more likely that they were the result of an inflicted injury but whether the evidence establishes that they were probably caused by human infliction. The next question would then be whether the evidence establishes they were probably caused by the mother or the father.

Lies/Withholding Information

39. It is common for witnesses in these cases to tell lies in the course of the investigation and the hearing. The court must be careful to bear in mind at all times that a witness may lie for many reasons, such as shame, misplaced loyalty, panic, fear, and distress. The fact that a witness has lied about some matters does not mean that he or she has lied about everything [R v Lucas [1981] QB 720]. It is important to note that, in line with the principles outlined in R v Lucas, it is essential that the court weighs any lies told by a person against any evidence that points away from them having been responsible for harm to a child [H v City and Council of Swansea and Others [2011] EWCA Civ 195].

40. The family court should also take care to ensure that it does not rely upon the conclusion that an individual has lied on a material issue as direct proof of guilt but should rather adopt the approach of the criminal court, namely that an established lie

is capable of amounting to corroboration if it is (a) deliberate, (b) relates to a material issue, and (c) is motivated by a realisation of guilt and a fear of the truth [Re H-C (Children) [2016] EWCA Civ 136 at paragraphs 97-100].

41. In Lancashire County Council v The Children [2014] EWFC 3 (Fam), at paragraph 9 of his judgment and having directed himself on the relevant law, Jackson J (as he then was) said:

> *"To these matters I would only add that in cases where repeated accounts are given of events surrounding injury and death, the court must think carefully about the significance or otherwise of any reported discrepancies. They may arise for a number of reasons. One possibility is of course that they are lies designed to hide culpability. Another is that they are lies told for other reason. Further possibilities include faulty recollection or confusion at times of stress or when the importance of accuracy is not fully appreciated, or there may be inaccuracy or mistake in the record-keeping or recollection of the person hearing and relaying the accounts. The possible effects of delay and repeated questioning upon memory should also be considered, as should the effect on one-person hearing accounts given by others. As memory fades, a desire to iron out wrinkles may not be unnatural - a process that might inelegantly be described as 'story-creep' - may occur without any necessary inference of bad faith."*

42. Leggat J in Gestmin SPGS SA v Credit Suisse [2013] EWHC 3560, adopted and applied by Mostyn J Lachaux v Lachaux [2017] EWHC 385) in the family law context said this:

> *(i) An obvious difficulty which affects allegations and oral evidence based on recollection of events which occurred several years ago is the unreliability of human memory.*
>
> *(ii) While everyone knows that memory is fallible, I do not believe that the legal system has sufficiently absorbed the lessons of a century of psychological research into the nature of memory and the unreliability of eyewitness testimony. One of the most important lessons of such research is that in everyday life we are not aware of the extent to which our own and other people's memories are unreliable and believe our memories to be more faithful than they are. Two common (and related) errors are to suppose: (1) that the stronger and more vivid is our feeling or experience of recollection, the more likely the recollection is to be accurate; and (2) that the more confident another person is in their recollection, the more likely their recollection is to be accurate.*
>
> *(iii) Underlying both these errors is a faulty model of memory as a mental record which is fixed at the time of experience of an event and then fades (more or less slowly) over time. In fact, psychological research has demonstrated that memories are fluid and malleable, being constantly rewritten whenever they are retrieved. This is true even of so-called 'flashbulb' memories, that is memories of experiencing or learning of a particularly shocking or traumatic event. (The very description 'flashbulb' memory is in fact misleading, reflecting as it does the misconception that memory operates like a camera or other device that makes a fixed record of an experience.) External information can intrude into a witness's memory, as can his or her own thoughts and beliefs, and both can cause dramatic changes in recollection. Events can come to be recalled as memories which did not happen at all or which happened to someone else (referred to in the literature as a failure of source memory).*

(iv) *Memory is especially unreliable when it comes to recalling past beliefs. Our memories of past beliefs are revised to make them more consistent with our present beliefs. Studies have also shown that memory is particularly vulnerable to interference and alteration when a person is presented with new information or suggestions about an event in circumstances where his or her memory of it is already weak due to the passage of time.*

(v) *The process of civil litigation itself subjects the memories of witnesses to powerful biases. The nature of litigation is such that witnesses often have a stake in a particular version of events. This is obvious where the witness is a party or has a tie of loyalty (such as an employment relationship) to a party to the proceedings. Other, more subtle influences include allegiances created by the process of preparing a witness statement and of coming to court to give evidence for one side in the dispute. A desire to assist, or at least not to prejudice, the party who has called the witness or that party's lawyers, as well as a natural desire to give a good impression in a public forum, can be significant motivating forces.*

(vi) *Considerable interference with memory is also introduced in civil litigation by the procedure of preparing for trial. A witness is asked to make a statement, often (as in the present case) when a long time has already elapsed since the relevant events. The statement is usually drafted for the witness by a lawyer who is inevitably conscious of the significance for the issues in the case of what the witness does nor does not say. The statement is made after the witness's memory has been "refreshed" by reading documents. The documents considered often include statements of case and other argumentative material as well as documents which the witness did not see at the time or which came into existence after the events which he or she is being asked to recall. The statement may go through several iterations before it is finalised. Then, usually months later, the witness will be asked to re-read his or her statement and review documents again before giving evidence in court. The effect of this process is to establish in the mind of the witness the matters recorded in his or her own statement and other written material, whether they be true or false, and to cause the witness's memory of events to be based increasingly on this material and later interpretations of it rather than on the original experience of the events.*

(vii) *It is not uncommon (and the present case was no exception) for witnesses to be asked in cross-examination if they understand the difference between recollection and reconstruction or whether their evidence is a genuine recollection or a reconstruction of events. Such questions are misguided in at least two ways. First, they erroneously presuppose that there is a clear distinction between recollection and reconstruction, when all remembering of distant events involves reconstructive processes. Second, such questions disregard the fact that such processes are largely unconscious and that the strength, vividness and apparent authenticity of memories is not a reliable measure of their truth.*

43. All the evidence is admissible notwithstanding its hearsay nature, including Local Authority case records or social work chronologies which are hearsay, often second or third-hand hearsay. The court should give it the weight it considers appropriate: Children Act 1989 s.96(3); [Children (Admissibility of Hearsay Evidence) Order 1993]; [Re W (Fact Finding: Hearsay Evidence) [2014] 2 FLR 703].

44. When I turn to the evidence, I bear all these factors in mind in reaching my conclusions on whether the Local Authority have proved that C suffered inflicted injuries and who was responsible for them.

The Evidence

Medical Evidence: Part 25 Expert and Treating Clinician

45. One of the issues which has arisen is the relative status of the evidence given by a treating clinician as compared to that of an FPR Part 25 expert. This arose in the hearing before HHJ Hudson and was the subject of observations by Lord Justice Moylan in the Court of Appeal: paragraph 129-132. The Court of Appeal identified that the situation that Dr Flowers found herself in and the manner in which she became involved in the proceedings raise wider issues. They thought that they might benefit from broader consideration by the President's Working Group. I agree with the Court of Appeal that the issue would benefit from broader consideration but the remit of the Working Group does not at present encompass this. It may be that the remit of the group could be extended in due course. The issue clearly also is potentially a matter which the Family Justice Council might consider.

46. However given the issue arises in this case it has to be engaged with. In the time available to me and in the absence of detailed submissions on the issue the views expressed herein are largely confined to the facts of this case.

47. Evidence from an individual instructed pursuant to FPR Part 25 clearly results in 'expert' evidence. In a general sense expert evidence though is in reality opinion evidence. The court permits an individual to give opinion evidence because they have an 'expertise' in a particular field. A report from a treating clinician will contain opinion evidence. That clinician is qualified to give an opinion in the medical sense because they are a qualified doctor. The more senior that individual is the more likely the court would accept that they had expertise which allowed them to offer opinion evidence to the court. A consultant level medical professional would I think barring some oddity, bring them into the bracket where the court would be likely to view them as an expert qualified to give an opinion. The opinion of a relatively junior doctor on a relatively straightforward issue might also be accepted by the court as qualifying as expert evidence because it would fall within expertise on that issue. Conversely the opinion of a relatively junior doctor on a matter of considerable complexity might not. So in this case the opinion evidence of Dr Flowers who is a consultant paediatrician can properly be treated as expert evidence because she is opining on matters within her area of expertise. As a matter of fact she is less experienced than Dr Mecrow both in clinical practice and as an expert witness which might have some bearing upon the weight which her opinion might be given but that is far from saying that her evidence is not expert evidence. Thus in theory one might have a part 25 expert who was in fact less experienced in clinical practice and less experienced in acting as an expert witness giving evidence alongside a treating clinician, who was in fact more experienced in clinical practice, and more experienced in acting as an expert witness but by chance was the treating professional when the child came to hospital. In those circumstances there can be little doubt that the court would view their opinions as amounting to expert evidence and potentially as a part 25 expert.

48. However there is at least one significant potential limitation on the weight that might be given to the opinion evidence of the treating professional. The situation of the medical professional who is called upon to treat a child generates an opinion in a very different context to that of the part 25 expert. The focus of the treating professional is to treat the child by ascertaining the most likely cause of the condition or injury. This

may be undertaken as a result of a process of elimination or otherwise. The imperative is to address the condition and to adopt an appropriate plan to treat or protect the child. The treating professional may develop a personal relationship with the child or indeed with the carers. Having formed an opinion in the crucible, perhaps of an emergency it may be difficult for the treating professional to detach themselves from that and apply a purely objective approach. The situation of the part 25 expert is of course entirely different. Dr Mecrow might decline to see parents or child in order to remain detached although not if it was necessary to secure information necessary to enable him to report. In assessing the relative weight to be given to the evidence of a treating professional as against that to be given to the part 25 expert a court ought to bear these factors in mind. The outcome of bearing them in mind might be that the court concludes no distinction need to be drawn. On the other hand the court might conclude that the treating professionals opinion should properly be given less weight for objectively good reason. There are of course cases where the court may decide that it should give less weight to the opinion of a part 25 expert where for objectively good reason it is demonstrated that their opinion is in some way undermined.

49. In this case the relative weight to be given to the opinion of Dr Mecrow, Dr Flowers and Dr Bolton is affected only to a very limited degree. I conclude that there was a difference between Dr Mecrow and Dr Flowers in their reasoning process which led to their opinions formulating. Dr Flowers does appear to have adopted more of a linear process whereby eliminating accidental or infectious causes she ended up at an inflicted cause although I acknowledge she also kept in mind the possibility of an unknown aetiology. Dr Mecrow appears to have adopted a more holistic approach overall and was very conscious of the expert nature of the opinion being sought and the limitations on his ability to deliver a clear opinion because of his lack of clinical experience and the lack of research in the area.

Medical Evidence

50. Attached to this judgment is a Schedule (Annex B) which summarises the medical evidence of Dr Flowers (consultant paediatrician: treating clinician), Dr Mecrow (consultant paediatrician: part 25 expert) and Dr Bolton (forensic pathologist: part 25 expert) which was contained within their various reports, emails, addendums and the minutes of the experts meeting. That schedule was drafted by the Guardian's legal team and is agreed by the other parties as representing the position of the medical experts up to and including the commencement of their oral evidence in this case. I shall set out below some of the salient points made by the experts when they gave oral evidence before me.

51. The petechial haemorrhaging or rash is graphically shown in the photographs taken by the mother between 15:07 and 16:22, the photographs taken at the hospital and the body maps completed by Dr Flowers on the evening of 1 June and the morning of 2 June. A written description cannot really get close to conveying what the photographs and body map do. What has been repeated by all of the experts and is striking to the naked eye is the very distinct demarcation between the petechial haemorrhages and the unaffected skin. Around C's right eye, around her chin, around her left eye, on her forehead and extending backwards over her scalp to the back of her head, and down the right side of her neck there are petechiae. Around the right eye, the back of the head and the chin they are intense. The area of sparing across the face looks like a cat mask running from underneath each eye across the nose and cheeks incorporating the upper and lower lip. At the sides of her head, the area from her cheeks back to her ears are spared. The central part of her neck and her left side of her neck around to the back of her neck are spared. There are no petechiae on the upper chest. There is some swelling around the eyes. There were two pinpoint petechiae in the conjunctiva. There were no other injuries.

Dr Mecrow

52. In the main Dr Mecrow did not alter his position very much from that which she had articulated in his reports, in the expert meeting and in his oral evidence to HHJ Hudson.

53. I note the following aspects of his evidence either because it was new or gave particular emphasis to something he had said earlier.

i) Sparing could arise from natural variations in the tissue but it could also arise from pressure on the surface of the skin including from tightfitting clothing.

ii) I find it hard to see how you could replicate the pattern of petechiae in C. We all find it very hard to explain this pattern.

iii) If he was instructed to do his very best to recreate the petechiae that C sustained he would probably compress her chest hard although it would not account for the sparing. The literature shows that only 3 of 33 children who were observed being smothered produced petechial rashes.

iv) You can compress the chest without getting a rib fracture. We do not know if there is a link between the length of compression and the extent of the petechial rash.

v) The capillaries within the eye should be subject to the same pressure change as other areas and the lack of very notable subconjunctival haemorrhages in C is different.

vi) Children who retch in vomiting for a few seconds can give themselves spectacular petechial rash.

vii) If a hand had been used to occlude the mouth and nose one might see some linearity where the fingers had pressed into the skin. It would be possible to put a cloth over the face which would dissipate the force and reduce the possibility of linearity.

viii) If C had attended hospital with a history of retching or vomiting that explanation would have been accepted as the cause.

ix) The extent of the petechiae and the marked areas of sparing are unique.

x) The opinion of Dr Abinun that AHEI is a 25% possibility put some meat on the bones of my acknowledgement of the possibility that there could be an infectious cause. The presence of a non-blanching rash on 3 June would lend support to an infective or immunological process going on. The presence of gunge in C's eye could indicate an infection. An infection affects the integrity of the walls of the blood vessels and allows them to leak fluid into the surrounding tissue. There are lots of unknowns and uncertainties in medical science.

xi) A rash lasting 5-6 days is more consistent with a vasculitic process.

xii) A compression of C's chest combined with a cloth over her face is a possible cause. It is a good fit. I cannot say it is an opinion on a balance of probabilities that I hold. How could you not get sparing at the back?

xiii) The significance of a BRUE which Dr Mellon entertains is that if they are prolonged they have the potential to raise venous pressure because there is an obstruction of the airway and thoracic pressure raises venous pressure in the head and neck.

xiv) If this was an inflicted event it was a serious assault with force being applied for 15 to 30, maybe 45 seconds.

xv) After such an event she would have taken a big breath in, crying, sobbing, abnormal gasping for breath. A non-perpetrator would have noticed distress but wouldn't notice what it arose from.

Dr Flowers

54. In the main Dr Flowers also stuck to the tenor of the evidence that she gave to HHJ Hudson. By that time she had moved away from the opinion expressed in the child protection medical report when she had said that 'in the absence of any other plausible explanation it is my opinion that suffocation is highly likely to be the cause of the petechiae on C.' [E12]. During the experts meeting she said [E172] 'in the absence of any other plausible medical explanation it is my opinion that it is most likely the cause of the petechiae seen is some form of external mechanical force and/or compression'. During the hearing before HHJ Hudson and as the Court of Appeal accepted, the effect of her evidence was not that she favoured a combination of smothering/suffocation and chest compression as the probable cause. In September 2019 she said "...as per our discussion in the previous experts meeting I continue to be troubled by the extremely unusual distribution of the petechiae with the areas of sparing around the nose and mouth which I find it difficult to explain in any medical or anatomical cause…Having something over the face that means the blood is forced out of the areas of sparing could in my opinion account for the sparing to her face and nose."

55. At the conclusion of her evidence I asked Dr Flowers to summarise her opinion. She said that something had caused the rash that she couldn't explain it medically. She invited the court to weigh what Dr Abinun had said and said she hadn't been able to make it fit into a medical diagnosis. She said she had moved away from identifying any one particular mechanism for an inflicted cause. She said some mechanisms could be possible. Rhetorically she asked could it be something unknown and referred to the sparing being so dramatic. She repeated that she couldn't make it fit a medical diagnosis, that there were possible inflicted mechanisms and that there was the unknown. I took this to be broadly consistent with the net effect of her evidence as identified by the Court of Appeal and as contained within the schedule of medical evidence which was that suffocation was a possible rather than a probable cause.

56. Some of the points she made I set out below. They were in the main repetition or emphasis of things she had said earlier:

i) I keep coming back to it, I can't explain it medically, something has caused the increase in pressure and lead to bleeding. I can make sense of her presentation by compression of the thorax.

ii) It is a very unusual rash, it is highly unusual, it is possible there is an unknown cause.

iii) I don't recall seeing a rash on 3 June.

Dr Bolton

57. The overall effect of Dr Bolton's evidence was included in the medical evidence schedule. As the schedule makes clear there were very few areas in which Dr Bolton was not in agreement with Dr Mecrow and indeed with Dr Flowers. At the commencement of her evidence, Dr Bolton confirmed that nothing she had received in terms of updates since her last report on 30 August 2019. In that she said:

> *"...of the proffered scenarios, the one with C on a caregiver's knee or some other soft surface is the most easily achieved and perhaps the most natural for a situation to develop. Whilst, the scenarios are possible, I'm not sure that any of these mechanisms reach probable. However as time goes on, I am increasingly of the opinion that C's presentation is the result of inflicted injuries."*

58. By the time she completed examination on behalf of the Guardian and the local authority Dr Bolton's evidence had developed. In the course of cross-examination by the local authority pictures of the changing mat and the pouffe on which the changing mat was placed were produced. Having seen those Dr Bolton opined that they appeared sufficiently soft that C's head could have been pressed into the changing mat and pouffe which would have absorbed the pressure to the extent that it would allow petechiae to have developed on the back of her head. I found this evidence hard to follow as the area on the front of the face and cheeks which would have been subject to pressure was greater than the area at the back of the head which would have suggested greater pressure per unit of area at the back than the front. Dr Bolton suggested that the soft mat and pouf would have absorbed the pressure. However if that were the case the head would have continued moving downwards until the pressure was equalised and I could not follow how the pressure on the back of the head could be significantly less than the front of the head. As I expressed during the hearing it was unfortunate that this theorising had not taken place with the benefit of input from Doctor's Mecrow and Flowers which might have made it more coherent and in my mind more reliable. She was unable though to account for the sparing on the left cheek although suggested it might be explicable by a hand holding an object which extended over the cheek. An alternative was put to her of C being pressed down onto her left cheek which might have accounted for the sparing on the left cheek and the petechiae on the back of the head but Dr Bolton questioned why the back of the head if pressed into the mat could have sustained petechiae but the cheek would not. She also accepted that the absence of any facial injuries was not inconsistent with pressure being put on her face which contrasted with her prior opinion in which she said one would have expected C to have sustained some other injury to the face. At the conclusion of her examination by Ms Howe she said that she now considered that inflicted injury was more likely than not and that withstood the difficulty in identifying a clear mechanism by which petechial rash and clearly delineated sparing could have been inflicted. She said she was unable to offer a probable scenario of how that combination was inflicted but various scenarios were possible with some being more probable than others. She said that none of the doctors were content with the position but she now favoured something having been done to C. She emphasised that in practice as a forensic pathologist it was not uncommon for them to be unable to explain the precise mechanism by which an injury was inflicted and she did not feel that was a bar to expressing an opinion now. This seems to be in contrast with the position that she had taken in her first report and during the experts meeting.

59. Dr Bolton explained that her views had developed and changed such that she was now able to express an opinion on the balance of probabilities for a number of reasons. She said that she had come to appreciate that there was a distinction between her experience and that of the paediatricians and that the literature was primarily pathology based. She said that she had not previously been aware that C had been expressing significant distress at the relevant time. She also said that the inability of

the clinicians to come up with a unifying diagnosis played a part. I had assumed before she provided that explanation that it was the theorising that had taken place following the emergence of the pictures of the changing mat and pouf and her seemingly satisfying herself that there was a mechanism which explained the sparing led to her changing position but that was not her explanation. Apart from it becoming clearer that C was distressed at the relevant time (and I note that the mother's statement in any event made this clear although the father's did not refer to it) the other matters she referred to were extant at the time of the experts meeting and her giving evidence earlier in the year.

60. I have no doubt that Dr Bolton's expressed opinion is a genuine one. I have reservations about how much weight I can place on it given the circumstances in which it was given and the lack of crosschecking with the two other experts. A significant change of stance which has not been subjected to the sort of debate that took place in the experts meeting and particularly where the other experts have not been cross-examined in relation to it makes me cautious in the weight I feel it proper to attribute to it. That is no criticism of any of the advocates because the emergence of the pictures of the changing mat and pouf was in response to my intervention when it was being suggested that the surface on which C was being changed was soft. But nonetheless no enquiries had been made prior to that point to establish precisely what it was that C was being changed on and what its nature was. For what it's worth it did not appear to me as if the combination of the changing mat and the leather pouf would provide a particularly soft surface such as a beanbag or pillow but would be significantly firmer. However none of us have had the benefit of seeing the items in question and so theorising about ability to absorb pressure is pure speculation.

Dr Abinun

61. On the Friday prior to the commencement of this hearing the Guardian's team made an application to adduce expert evidence from a consultant paediatric immunologist. The necessity for this report arose out of the fact that since June 2018 C has suffered from a number of episodes of rashes or skin conditions and has been under investigation by Dr Owens in respect of them. They had identified Dr Abinun, an emeritus consultant in paediatric immunology and infectious diseases. He was able to report by Monday 18 November 2019, the first day of the hearing. He attended to give evidence on Tuesday, 19 November 2019.

62. In his report Dr Abinun said:

i) On the balance of probability his opinion was that a diagnosis of acute haemorrhagic edema of infancy (AHEI) was not supported. When asked to clarify where he considered the balance fell he said 75% likelihood that it was not AHEI and 25% probability that it was. A skin biopsy would provide positive proof.

ii) The subsequent rashes and skin conditions that C has experienced including that of 5 June 2018 and later were unconnected with AHEI but rather were idiopathic urticaria and angioedema.

iii) AHEI is characterised by the triad of fever, oedema and cutaneous purpura. The lesions are the most consistent aspect of the disease. They may appear as petechiae but progress to round purpural target shaped lesions. C had some swelling and had petechiae which might fall within the triad. She did not have fever and nor did the petechiae go on to develop into the target shaped lesions and were not present on her extremities. It was therefore not likely that she had AHEI.

iv) AHEI is not well recognised and is probably underreported. There are 300 or so cases reported in the literature including one reported by Dr Abinun himself. He accepted that the condition was not well understood and that overall there were many areas relating to the effects of infection and immunological responses on the skin that were not under stood. For instance it was not known why clearly delineated target shaped lesions formed. The expression idiopathic in itself means that it is not known what the underlying cause of the condition is.

v) AHEI may be caused by an underlying viral infection what could be triggered by something like an immunisation. An immunisation on 27 April is a bit too far outside the usual range which might be 1 to 3 weeks.

vi) The appearance of the petechiae did not seem consistent with an allergic reaction. You more commonly get weals, not petechiae. Highly likely you could rule out an allergic reaction.

vii) If there was a non-blanching rash on 3 June that is closer to the first and might be a sign of some link. It is unlikely to be three separate events.

63. Finally a report was received from Dr Mellon which dealt with an episode when C had been found in her cot unresponsive by her grandmother. This is now referred to as a brief, resolved, unexplained event BRUE. He said that it was not possible to say definitely what the cause was most likely to be and how significant it was. The feasible causes of the BRUE were physiological (gagging, laryngospasm, neonatal periodic breathing); arrhythmias; suffocation, gastro oesophageal reflux.

64. As Dr Mecrow noted there is much that we do not know or understand about C's physiology and medical conditions.

Factual Evidence

65. Attached is a detailed chronology, Appendix A, which sets out both the factual and procedural background to the case. Incorporated within the chronology is much of the documentary and oral evidence that I have read and heard. Insofar as I have needed to determine matters which relate to the background in which C sustained the petechiae I have attempted to incorporate the evidence and my conclusions within the chronology.

The Mother

66. The mother gave evidence for about 2 ½ hours, the majority of which was being questioned by Ms Howe. She was clearly anxious although she was able to relax at times for instance when describing the interchanges between herself and the father over who should change C's dirty nappy. She was occasionally close to tears particularly when she was recalling how worried she was on 1 June and in particular about whether C might have had meningitis. I doubt that could have been acted. In general she came across as open and prepared to answer questions directly. I did not detect evasiveness in her replies. When questioned about C's preference for her and her rejecting or sulking with her father and how that manifested itself and how the father responded she was more hesitant but did not seek to minimise the issue or to exaggerate the nature of the dynamic between C and the father at that point in time. She appeared to be appropriately reflective about what had happened to C and in particular whether the father had played any role in it. I thought the narrative answer she gave as to how she had had sleepless nights examining what had happened and who might be responsible and in particular whether the father was responsible; the

issue of suffocation having been referred to on 1 June, it was a genuine account of the anxious consideration she had given to it and some of the issues that she had mulled over. Her evidence that she had never seen any behaviour by the father towards her otherwise which suggested a violent nature was sincere and a true reflection of her experience of the father. When pressed on the details of 1 June her account remained consistent with that given to health professionals on 1 June, her police interview and her witness statements and earlier oral evidence. There were occasions when she allowed herself to be overridden by counsel, seeming to agree with formulations put to her which were not necessarily consistent with her other evidence. I conclude this was a product of her anxiety and the content of her answers was not such as to make me believe that she was particularly suggestible or susceptible to pressure. There were several occasions when she said that she could not remember and did not wish to say something which she was not sure about. Her account was internally consistent and largely consistent with contemporaneous evidence or the evidence of other individuals.

67. She had lied to the police in her interview when asked about whether she or the father took drink or drugs. Given that she later accepted that both she and the father had smoked weed at various times she clearly did not tell the police the truth about that. She explained that she was worried given it was the police who were asking her and she said she was not aware that smoking for personal use was unlikely to lead to a prosecution. I accept her evidence that she did not tell the police the truth was a product of her anxiety about the consequences rather than something which might have relevance to the enquiry into how C sustained the petechial rash. It therefore falls within the Lucas criteria as being related to something unconnected to the events under enquiry and thus it is not capable of corroborating her having acted in some culpable way. I do not believe that she did under play the issue of C's preference for her and her sensitivity or rejection in relation to the father. She discussed it in her police interview and the way she described it in her evidence appeared to be open and genuine. Her evidence of the father's guilty feelings after C sustained the bruises from the bouncy chair and how he made a particular effort after that to reconnect with C appeared to me to be genuine and consistent with her description of his behaviour in the six odd weeks that passed before 1 June incident.

68. Although she did not dwell on the father's character she did make a number of observations which may be of relevance. First of all, in terms of her own reflections on what had happened to C, she did genuinely ask herself whether the father might have been responsible. I do not believe she would have been able to give the answer that she did unless she had actually gone through the process that she described. It had the sense of retelling an experience undergone. Whilst I accept that it is inevitably very difficult for an individual to come to believe that someone they love has harmed a child I believe that the mother's account of her attempts to process that possibility and her reasons for rejecting the possibility were genuine and were as extensive as could probably be achieved by anyone in the circumstances. I remind myself that even now the expert evidence paints a very mixed picture as to the likelihood of C being the subject of an inflicted injury. If the experts are unclear, the task of an intimate partner in questioning themselves as to whether the other partner may have been responsible I imagine is that much harder. The fact that her family also did not believe the father to be capable of it would of course make it that much harder for her to come to such a belief. The sorts of questions that she asked herself I think were valid ones. In saying that she had never felt fear about the father or his behaviour I thought was genuine. There is no suggestion that their relationship has been characterised by abuse in any event and her evidence was consistent with a relationship free of abuse. She clearly did go over what had happened on 1 June in order to try to see whether there was anything about the father's behaviour which

might point to his culpability. Her account that he genuinely appeared as anxious as she was and as anxious to get to the hospital had led her to conclude that he was genuinely as worried about meningitis or some other mysterious condition. Nor could she think of anything in the events of 1 June which gave rise to any suspicion in her own mind. The impression of her evidence was that whilst she did not have a clear recollection of precisely how long passed between her going upstairs and the father bringing C up or of whether she could hear C crying throughout, she was clear that there was nothing which indicated some change occurring downstairs which might support the infliction of chest compression and suffocation with the consequent dramatic distress that Dr Mecrow described would have been probable following on from such an incident. Her description of how the father felt some degree of guilt that C had been bruised by the bouncy chair on his watch and his response to that also in my view was genuine.

69. My overall impression of her was therefore that she was a credible and honest witness.

The Father

70. The father gave evidence over about 2 hours, the majority being cross examination by Ms Howe. In the main he was measured and tried to answer the questions he was asked. He was clearly nervous and at times was confused by some of the lines of questions. I thought this was a product of his anxiety and his personality rather than any attempt to deflect questions. He was not argumentative, was polite and behaved appropriately throughout his evidence. He appeared close to tears on a couple of occasions when the allegation that he had harmed C was put to him and when he described the alarm that he and the mother felt particularly when the glass test did not show the rash fading. This was consistent with the mother's own account of how she had been terribly anxious about the possibility of meningitis. His demeanour at this point was suggestive of a lived experience which of course suggest he genuinely was anxious about the possibility of meningitis and which in turn would suggest he had not assaulted C. However, although less probably, it might have been a reflection of him recalling the distress he felt at harming C. He also appeared close to tears and extremely stressed when various permutations were put to him of how he might have inflicted injury on C. His response both in terms of what he said and how he said it appeared natural; an intensely felt but measured denial.

71. There were several occasions when he spoke about C in a very child-centred way; his memory of the experiments over which formula milk worked best and what they finally settled on; his account of the things he did to try to settle C when the mother had a lie-in and he persevered for 1.5 hours trying a variety of strategies to settle her; his ability to put himself into an infant's mind and see things from her perspective rather than an adult perspective all indicated a man who was attuned to his daughter and took a genuine interest in her and was prepared to put in the effort needed to make sure the bond was rekindled. He clearly had been a very hands-on father but some distance had developed when he returned to work and C began to prefer her mother. When he said he was gutted it was clearly heartfelt and in describing her arrival and the first month they had together he described the intensity of the experience as addictive; I interpreted this in a positive way. He did not give the impression that he was a man who felt slighted by the change in the balance of C's preference but understood it was a consequence for her of the change in his availability. I did not get the impression when he said he was 'gutted' that it was anything more than the feeling that any father might experience with his young baby preferring the attentions of their permanent carer rather than their working father. Given the fact that he had been prepared on other occasions to persevere for very considerable periods of time in trying to settle C the scenario of him rapidly losing

control within a matter of moments as C played up whilst he changed a nappy would represent a very considerable departure from previous behaviour.

72. He was robustly cross-examined by Ms Howe both in relation to his police statement, his witness statement and his earlier account given to HHJ Hudson. In the main his account on the central components of what happened that day has remained consistent over time. The one significant omission from both his police interview and from his witness statement was that he did not refer to C being significantly upset in either his police interview or his first witness statement. His explanation in relation to the police interview was that he had been answering questions which were put to him and the police had not asked him about how C was. A perusal of the interview reveals this to be accurate. In his first witness statement he refers to C being windy when he got her from the cot but he does not then mention her emotional condition deteriorating to the point of her screaming. When challenged on this he said that he had probably forgotten to mention it but when specifically asked about it during the trial before HHJ Hudson he had been able to recall how she was and explained that she had cried a lot. He said to me this was in a way that he had only seen on a couple of occasions before and referred to the inoculation incident which the mother also gave evidence about. Their account of how she presented when significantly distressed was consistent. It was suggested that his failure to refer to C's emotional state was an attempt to downplay or suppress important evidence in order to distance him from C being upset. In respect of the police interview I accept that the failure to mention it was probably a product of the structure of the questions he was being asked. In relation to the statement it is harder to understand. I certainly accept that it is possible to forget to mention something and later to recall it. I also do not really see what motive would be served in deliberately suppressing the information. His statement was served on 27 July and the mother's had already been served on 24 July in which she recounted how C had been grisly when taken from her cot, had started to cry following the sandwich kiss and had continued to cry throughout the period the mother was upstairs. The father couldn't recall whether he had seen that or not when he drafted his. The fact is that she was also plainly recorded in the messages which the mother had sent to her sister and was visible from the photographs and was referred to in the grandmother's police witness statement. It is also the case that C's emotional state was not referred to at all in any of the histories given at the hospital between their arrival and 7:00pm when Dr Flowers spoke to them. Overall I'm not persuaded that the absence of any reference to C crying is an indicator that the father was trying to hide something but rather was either an oversight in the preparation of his statement or that he had genuinely forgotten. There were aspects of his oral evidence when he was unable to remember matters and I concluded that this was simply a product of him having a worse memory than the mother for instance. His evidence to the police that he woke up at 3:00pm is in my view another example of an innocent error on his part. His account to the police was a full account of what he said happened and was consistent with the account given to the hospital and the account is given in these proceedings. The time he got up was irrelevant to the account that he gave. Had he said that he got up later and so had missed a significant part of the period before C became poorly it may have indicated an attempt to distance himself from events. However it was not of this character at all and so I conclude that this was an error under the pressure of a police interview.

73. It is right that the father lied to the police about his cannabis use. In his police interview he denied using drugs. He now accepts that he has used cannabis for some years. He gave up briefly before C was born but resumed using some time afterwards. He described using it to relax and enhance to his enjoyment of other things. What he said to the police was therefore plainly a lie. Was it a lie in order to cover up some link between his cannabis use and what happened or was it a lie born of fear of the

consequences of the police. Was it a lie to mislead social services in relation to his behaviour towards C or his suitability as a parent. In relation to the police I am satisfied from what he said that he lied because he was fearful of the criminal consequences not because he was hiding something potentially relevant to C. In relation to social services, to the extent that his lie to the police was also motivated by a desire for social services not to know was because he feared it might have some consequence in terms of his future relationship with C. It is of some concern that he ceased taking cannabis for a week before his police interview in order to generate a test result which would not identify him as a cannabis user. This does demonstrate an attempt to manipulate the situation to cover something he was worried about. Can one though infer from this that he has sought to manipulate his account in some way to disguise his culpability for inflicting injury on C? I do not believe that one can. The cannabis issue is not material to the causation of injuries to C. All the evidence which I accept demonstrates that he had not smoked cannabis on that day and so insofar as it might have altered his mood that could not be in play. His concern about possible imprisonment or the view social services would take (low level personal cannabis use being pretty innocuous in the context of child protection) was the reason underpinning the lie or the attempt to disguise his cannabis use. It was not linked to something that had gone before in my view. His description of his cannabis use was frank and I found credible. He said he had not smoked cannabis that day because he did not do so during the day and whilst C might later be in his care. His description of washing his hands after having a tobacco cigarette supported his careful approach to smoking whether tobacco or cannabis. I therefore do not consider that cannabis use is of any relevance to the events of 1 June. I do not consider that his lie to the police about his cannabis use is any corroboration of the assertion that he assaulted C.

74. Overall I considered him to be a credible and largely honest witness.

The Grandmother

75. The maternal grandmother has given a statement to the police on 11 June 2018. She has given a statement within these proceedings. In the former she sets out how in her view she never had any concerns about how the mother cared for C. She said that the father had been a bit upset that C seem to prefer the mother over him and had put a lot of time and effort into C in the last few weeks. In the latter she sets out her experience of C developing a rash or swellings since she and the maternal grandfather have had care of her. This statement and the photographs which accompany it demonstrate that C has experienced what appear to be fairly frequent episodes when she has developed either a rash or swelling. On some occasions they are very limited in extent on others they are far more obvious. The maternal grandmother says that since C has been administered antihistamine her tendency to developed rashes and swellings has diminished and she is more comfortable.

Analysis

76. In carrying out my analysis I am drawing upon all of the evidence that I have read and heard including the evidence that is incorporated within the chronology and any findings I have made there together with the medical evidence contained within the summary. The evaluation required in order to reach a conclusion on the balance of probabilities as to the cause of the petechial rash sustained by C on 1 June 2018 involves weaving together a number of different strands of evidence, ascertaining how the factual and the medical evidence interact with and influence each other, drawing inferences, bringing to bear common sense, assessing likelihood (including the probability of somebody behaving in a particular way) and attempting to evaluate the totality of the evidence within that analysis. Inevitably this judgment can only incorporate the essential components of that evaluation.

77. The agreed medical evidence summary made the task confronting me a little easier in that the presentation of the medical evidence makes it somewhat more accessible than was the case before HHJ Hudson or the Court of Appeal, but nonetheless drawing together the various components of the medical evidence still presents a challenging task. The number of documentary sources including their written answers and their evidence given to HHJ Hudson and to me represents a very considerable body of evidence from which one can extract material which might support quite different answers to the same question. The opinions of the three key medical witnesses has ebbed and flowed. Dr Flowers opinion on the cause of C's presentation has drawn back from expressing a probable cause. Dr Bolton on the other hand has moved from being unable to identify a probable cause to – at the conclusion of cross examination by the local authority concluding that inflicted injury was more likely than not. Dr Mecrow has perhaps been more consistently cautious about being able to identify a probable cause. It is necessary to stand back and seek to assess the combined effect of the totality of the medical evidence. That must then be combined with all of the other evidence in order to undertake a non-compartmentalised overview of all of the evidence and to draw a conclusion on whether the local authority have established that it is more likely than not that the petechial haemorrhages were the result of human infliction and if so whether it is established that it is more likely than not that the mother inflicted them or whether it is established that it is more likely than not that the father inflicted them in an attempt to smother, suffocate or otherwise asphyxiate her.

78. The meeting of Dr Flowers, Dr Mecrow and Dr Bolton plainly provided an opportunity for the 3 to exchange opinions, test theories, listen to feedback on their views and where possible to see whether a consensus emerged. That it seems to me was the best forum in this case for exploration of particular theories. The process of giving evidence individually and where new material was presented to the doctors in a somewhat piecemeal fashion did not in my view lend itself to the generation of the most reliable evidence. In the course of cross examination of Dr Bolton questions were put about a mechanism which might explain how C had extensive petechial rash on the back of her head notwithstanding her head had been pushed into a surface. Pictures of the changing mat and pouffe were provided by the parents, and Dr Bolton was then asked to explain for the first time the mechanics and physiology which might permit of an explanation for the petechial rash on the back of C's head; this having been one of the central difficulties that the experts had confronted in their discussions about possible mechanisms which would explain C's injuries. As I have set out above I was not satisfied that this had been sufficiently analysed and of course it had not been discussed by Dr Bolton with Dr Mecrow and Dr Flowers and nor had they been questioned about it. In the main I therefore prefer the totality of the evidence which emerged from the joint meeting which I conclude was a medium which was more likely to produce consistent and reliable evidence. I of course take account of all that is said in the individual reports and the oral evidence as well.

79. The process of reaching a conclusion as to probable cause by the exclusion of possible causes can be a valid and reliable methodology. However it has its limits and care has to be taken in its application in order to avoid a potentially misleading outcome. The process must also take account of the possibility of an unknown or unidentified aetiology. Where potential causes can be excluded either with certainty or a very high degree of reliability the narrowing down of possible causes can provide a reliable outcome. That outcome can then be factored into the wider evidential evaluation. Science may be capable of excluding a cause. Other evidence may be so clear that another cause may be excluded. However where potential causes are excluded on a less reliable basis care needs to be taken about the ultimate conclusion. The evidence of Dr Flowers, Dr Mecrow and Dr Bolton was that petechiae could arise from a very

wide range of causes ranging from the trivial (straining with constipation) through prolonged coughing or vomiting, through accidental suffocation through to inflicted asphyxiation. The causation of petechiae and therefore the process of identifying the probable cause is quite different indeed from for instance spiral fractures in the arms or legs of immobile children or the combination of subdural haematoma, retinal bleeding and encephalopathy. In this case Dr Mecrow's view was that had the parents given a history of C having had a coughing fit or something similar that that explanation would probably have been accepted. The overall medical evidence was that C's presentation was very rare indeed with the distinct sparing but nonetheless it might still have been attributed to a coughing fit. The possibility of one of the innocuous causes of petechiae has been ruled out by the medical witnesses because there is no history of the parents witnessing anything of that nature. Equally the possibility of accidental suffocation was excluded albeit Dr Bolton appeared to accept in her oral evidence that C getting herself into a position in her Moses basket where her nose and mouth were obstructed by her arm could not be entirely ruled out. Whilst the ruling out of the other potential causes of the petechiae is therefore explained and whilst I understand how the medical witnesses undertook that process it does not in my view lead to the sort of certainty or reliability, particularly when one factors in the other factual evidence, where one can conclude that by a process of exclusion one can reliably end up at the conclusion that inflicted injury is the most likely; whether or not the most likely becomes probable. What if the parents were so engaged in Battle Royale or the noise of the hairdryer that they missed an episode of coughing or choking? Is the absence of a history and the assumption that they would have heard sufficient to reliably exclude this? The advantage of course that I have in comparison to the medical witnesses is that I am able to reach conclusions as to the wider evidential picture and how that fits with the medical evidence.

80. The substance of the medical evidence does not point to a clear conclusion in respect of the causation of C's petechial rash.

81. What is clear is that what she sustained was a petechial rash. The photos taken by the parents from 15:07 onwards and those taken at the hospital together with the body map drawn by Dr Flowers illustrate this. The appearance is quite distinct and Dr Mecrow, Dr Bolton and Dr Flowers all said they had never encountered such a presentation before. Dr Bolton specifically referred to this in the context of her experience and the experience of her colleagues in dealing with traumatic and accidental asphyxiation is of children. I understood their evidence to be that the intensity and distribution of petechiae was unusual and that the very unusual feature, possibly unique was the very distinct 'sparing' which is particularly obvious looking at C face on and which is so clearly delineated. Dr Mecrow said that he had come across cases where there was sparing in that the petechiae were not uniformly present over an area of skin but I understood his evidence to be that the delineation between areas of petechiae and sparing were not as clearly defined as in C's case. It was this experience of sparing that led him to the opinion that sparing might be a product of physiological variation.

82. What also seems to be agreed is that petechiae are pinpoint haemorrhages produced by blood escaping from the small blood vessels. These are described variously as veins, capillaries or small venules. They are underneath the surface of the skin like a bruise and so the skin is smooth to the touch. Some of the photographs have the appearance of the skin surface being raised or otherwise affected but Dr Flowers confirmed that this was not the case.

83. The intensity and patterns of petechial haemorrhaging were highly unusual possibly unique in the experience of the medical professionals. In particular the pattern of sparing was remarkable.

84. What also seems to be agreed is that blood may escape from these vessels as a consequence of a number of processes. The focus of the medical evidence has been on a 'mechanical' cause, namely something which obstructed the venous return (the draining of blood from the head) and which thus led to a rise in pressure in the blood vessels which in turn caused the thin-walled vessels to rupture and leak blood into the surrounding tissue. Another cause might be some form of infection either viral or bacterial. Such infections cause swelling in the blood vessel walls (vasculitis) which become incompetent allowing blood to leak into the surrounding tissue. Dr Abunin also gave evidence that an immunological response might also result in the blood vessel walls leaking.

85. There is some debate over how long it takes for petechial haemorrhaging to take place. Where it follows a rise in venous pressure they could occur over the course of a few seconds or a minute or two. The rising pressure does not have to be sudden but can build and when the necessary pressure is reached the haemorrhages can occur within a split second. In cases of asphyxiation a window of between 15 to 30 seconds or up to 45 seconds would probably be required to cause the rising pressure. The absence of any brain damage means a mechanical cause of asphyxiation did not last a few minutes. Where it is associated with a vasculitic or inflammatory process it could be a more gradual occurrence.

86. Petechial haemorrhaging would become visible over a period of time from them occurring. This may depend on the thickness of the skin and the skin colour and tone. They would be more obvious where the skin is unsupported. Their becoming visible and developing over the period between C getting up and her being taken to hospital is consistent with them being caused in a window between her going to bed and her nappy being changed.

87. Petechial haemorrhaging arising from an increase in venous pressure tends to be associated with fairly quick resolution and so they would usually have disappeared within a day or so. They may last longer but to last for five days is unheard of although it cannot be ruled out. Individual variations in physiology are known. Petechiae from a vasculitic or immunological response are associated with a longer duration

88. When one comes to the cause of the process which led to the petechiae, and so close to the ultimate question, the picture which emerges from the medical and other evidence becomes blurrier.

i) Coughing, Sneezing, Straining.

a) Although this is a common cause of petechial haemorrhaging it would have to be a severely prolonged bout (although very rarely can occur from a single event) but the extent of the petechial haemorrhaging in C is not consistent with that normally encountered from this cause. Nor is the sparing consistent with this cause. The absence of any history from the parents is also a contra indicator. The mother is very child focused the father less so but still child focused and with an audible and visual child monitor in the room with them and an open door house the likelihood of them not noticing a prolonged bout of coughing or sneezing and the probable crying that would have followed makes it unlikely that would not have noticed it even allowing for their being distracted by the PS4 or by the noise of the hairdryer. The fact that they noticed C stirring whilst the hairdryer was in play suggest the likelihood of them noticing a more prominent set of noises although one cannot completely rule out the possibility of it not being noticed due to noise and distraction either from the PS4s or the hairdryer or both.

ii) Accidental self-infliction

ii) The simple act of lying face down in the Moses basket even with her face pressed against the side or bottom of the Moses basket through her rolling or pushing herself into that position (which is evidenced by photographs and the parents account) would be unlikely to obstruct her nose and mouth in the way necessary to cause the rise in venous pressure. The nurse's comment to the parents (which I accept was made) is not in line with the views of the medical witnesses. Although it is conceivable that she could have obstructed her nose and mouth by having her arm under her head this still remains an unlikely cause. It does not explain the sparing pattern. Accidental asphyxiation of children tends to be associated with children getting into a position, such as being trapped between bars, and then being unable to extricate themselves from it. They are then found by a third party. The father's evidence was that when he got C she was lying on her back face up with her head tilted slightly backwards. This would mean she would have had to push herself into a position where she had trapped her arm under her head and obstructed her nose and mouth sufficient to accidentally asphyxiate herself and then have moved sufficiently to end the obstruction and roll onto her back. When the obstruction of her nose and mouth had ceased it is probable that she would have responded in a distressed way. The parents did not hear/see anything over the monitor or through the doors associated with her getting into that position and undergoing the accidental obstruction nor any distress when it ended.

iii) Human agency or Abusive infliction

a) Compression of the chest, strangulation, smothering of the nose and mouth are all possible causes of the petechial haemorrhaging. All are capable of causing the rise in venous pressure within the head and neck which could cause petechial haemorrhaging with compression of the chest emerging as the possible cause most favoured by the medical witnesses and Dr Bolton considering it to be the probable cause.

b) In this scenario the balance of the medical evidence favoured the need for pressure being applied to the areas of the face and neck which were spared petechial haemorrhaging. Although Dr Mecrow identified physiological differences as being a potential explanation for sparing he also accepted the exertion of pressure against the skin as being associated with sparing. Dr Bolton identified no physiological boundary which could be connected with the sparing particularly between the eyes and cheeks and over the nose. Her expertise as a pathologist would support this theory. Whilst supported tissue may be less prone to haemorrhage than unsupported tissue there is no clearly defined boundary. Blood vessels and the supporting tissue do not undergo a step change alteration hence usually sparing fades or peters out rather than being clearly delineated.

c) Compression of the chest would need to take place for an extended period of time in order to give rise to the necessary increase in venous pressure. The range was perhaps 15 to 45 seconds. It would not necessarily lead to bruising or to rib fractures as the pressure would be dispersed across an area. However chest compression could be associated with petechial haemorrhaging across the top of the chest above the point of pressure and the absence of this was a contraindication.

d) The medical witnesses were unable to conceive of a mechanism by which the chest was compressed at the same time as pressure was applied to the head and face in a way which would have both increased the venous pressure and have created the pressure to create the sparing. This was a significant issue for the medical witnesses during the expert meeting. Dr Mecrow in particular considered that in the absence of an identifiable mechanism which explained both the petechial haemorrhaging and the sparing one could not identify mechanical chest compression as a probable cause. This was supported by Dr Bolton and Dr Flowers at the experts meeting. Dr Bolton moved away from this in evidence.

e) Dr Bolton advanced a possible mechanism which in her view explained both the petechial haemorrhaging and all of the sparing. This as set out earlier involved the pressing of C's head into a softer surface by the hand and/or another object. The haemorrhaging at the back of the head could arise from the dissipation of pressure over that area by the shape of the head and the soft material underlying it. As I have outlined above I found this difficult to follow and it had not been cross checked with the other medical witnesses.

f) Other possible mechanisms included C being held across the chest of an adult with her chest being compressed by the adult's arm squeezing her against them and her head being forced back with a hand or other object across the face; alternatively being held against the chest of an adult and squeezed with her head being pushed into the neck and shoulder of the adult. These did not fully explain the pattern of sparing.

g) The absence of petechial haemorrhaging down the neck and across the top of the chest were a contra indicator for chest compression.

h) Asphyxiation by placing the hand or some other object across C's nose and mouth without chest compression was a possible cause. It was less likely to create the petechial haemorrhaging than chest compression. It also did not explain the areas of sparing. Whether alone or in conjunction with the chest compression, some sort of facial injury or marking would often be encountered with this mechanism; either redness or bruising or the tearing of the frenulum. As a six-month-old baby C might not have been able to move her face much against adult pressure although one would have expected her to try to resist the covering of her nose and mouth. The absence of any such marks is a possible contra indicator.

i) Strangulation by a hand or ligature is a possible cause. It would not explain the sparing and so a second mechanism would be necessary. It is unlikely to be manual strangulation as one would usually see marks around the neck created by the pressure of the fingers. A thin ligature would usually leave a mark. A broad ligature such as a scarf might not leave marks but would need to have occurred in association with pressure being exerted on the face to create the sparing.

j) An event of chest compression and smothering of a sufficient duration to have caused the petechial haemorrhaging would be associated with a significant distressed response from the child gasping for breath and sobbing which would probably last several minutes although they would settle. They would not necessarily respond fearfully towards the

perpetrator of the event if it was the first occasion they had been abusive to them. A non-perpetrator would see significant distress but would not necessarily identifying it as associated with some inflicted harm.

iv) Unknown cause of rise in venous pressure.

The medical evidence did not identify this in any real detail. Dr Mecrow after seeing Dr Mellon's report referred to the obstruction of the airways by the glottis. If this were a cause, on the basis of the other evidence it would seem to require some other second element to explain the sparing to the face head and neck.

v) Infection/AHEI/Vasculitis

a) Petechial haemorrhages can be caused by infection but C did not have a temperature until five days later and the limited distribution is not consistent with infection.

b) Viral infection is a possibility that cannot be fully excluded with absolute confidence. None of the medical doctors including Dr Abinun considered it a probable cause although none ruled it out completely.

c) The subsequent viral infection, hand foot and mouth on 5 June is probably not linked to the petechial haemorrhaging on 1 June. It is of a different nature with blanching rashes compared to the non-blanching.

d) The clarity of this position was somewhat altered by the emergence of the medical records which pointed to C having also had a non-blanching rash on 3 June. This is poorly evidenced but is clearly there. Both Dr Abinun and Dr Mecrow considered this created a possible link with an infective process which was ongoing.

e) Dr Abinun considered that on the balance of probabilities (75/25) C did not have AHEI. Although she had two of the triad of symptoms the petechial haemorrhages did not develop into the target lesions commonly associated with AHEI. He acknowledged that there is much that is not known about the reaction of skin to infective and immunological processes.

vi) Immunological response

None of the medical witnesses considered that an allergic reaction was consistent with the petechial haemorrhaging scene and nor was there a history which would provide a cause for a histamine reaction. The nature of an allergic skin reaction would be different to petechial haemorrhaging.

vii) Unknown cause of vasculitic/immunological nature

The medical witnesses all acknowledged the possibility of an unknown cause and acknowledged that medical science continues to acquire knowledge and understanding. There are areas which are not understood. Dr Mecrow in particular emphasised that in clinical practice it is not uncommon to be in a position where they are unable to identify a clear medical cause for a symptom or condition. Dr Bolton and Dr Flowers both said they had borne in mind the possibility of the petechial haemorrhages deriving from an unknown aetiology.

89. Inter-weaving this medical evidence with the other factual evidence to create an overall picture is the ultimate task that I have to conduct.

90. Self-evidently the medical evidence does not provide a clear answer to how the petechial haemorrhages were caused. The trend and it is a clear trend of the medical evidence is in support of a mechanical cause of them; this being some form of compression of the chest combined with the occlusion of the nose and mouth with pressure being exerted on the face and head to create sparing. Dr Bolton ultimately came to rest in the position of opining that this was a probable cause. Although genuine in reaching this conclusion I was unable to fully understand or accept the reasons she gave for having moved from the position she was in at the experts meeting to the position she ultimately reached. As I have explained earlier I also have some reservations about her explanation for the presence of intensive petechial haemorrhaging on the back of the head. The move away from the position at the experts meeting in the absence of any further exploration of this new theory with the other medical witnesses and its development during her evidence in court leads me to have reservations about how much weight I can place on the theory or the ultimate conclusion that the new mechanism was the probable cause. There remain contra indicators to the chest compression and facial occlusion theory in particular in relation to the explanation of the sparing. There remain contra indications in relation to a mechanical cause by human agency in any event.

i) The unique pattern of sparing is not fully explained. Although I accept that in some circumstances one does not need to know the precise mechanism where one is dealing with a highly unusual event which is outside the range of the experience of the medical witnesses, the inability to explain a significant component of it does raise a doubt as to whether logically it can then be attributed to an infliction by human act. It is different from the position in relation to bruising, spiral fractures, shaking injuries where there is very extensive clinical experience of the causation of such injuries and the absence of a precise mechanism does not detract from the general principle that such an injury is caused by an abusive mechanism. Where the range of possible causes of a condition flow from severe coughing through to asphyxiation the absence of a fully explained mechanism is a difficulty.

ii) The number and intensity of the petechiae on the face is unusual for someone who does not have injuries to the neck.

iii) The intensive petechial haemorrhages on the back of the head are hard to explain in any of the proposed mechanisms. Dr Bolton's explanation I have doubts about.

iv) There are no petechial haemorrhages on the chest.

v) There is no associated marking or injury to the face or frenulum and the conjunctival haemorrhages were very limited.

vi) The petechiae remained for up to 5 days when usually they would resolve within a day.

91. Thus the medical evidence does not point conclusively to an inflicted injury but nor does it point conclusively away from an inflicted injury. It is a case where it seems to me to be particularly important that the medical evidence is not compartmentalised and in particular that the court does not fall into the trap of treating the most likely medical explanation as being the probable explanation. The evidence of the parents

and the wider picture together with inherent probabilities and common sense must also be interfaced with the medical evidence to produce the complete picture.

92. The evidence in relation to the mother and father as parents and people including my conclusions as to their credibility and nature suggests that the mother in particular dotes on C, having always wanted to become a mother and that she has dedicated herself to C's care. From what I have read and heard, the nature of the parental relationship is one which is broadly equal and respectful. The mother is not in thrall to the father. She does not demur to him. She is able to hold her own with him; this is a function both of her but also of him and the dynamic that exists between them. Her account of her extensive reflecting upon what happened to C did not exclude the father from the pool. She asked herself whether he could have done it; others might have automatically excluded him. Her reasons for rejecting him as a possible perpetrator were sound ones. Although she loves him and he is a valued member of her own family I thought she was sufficiently reflective and able to detach her personal feelings to allow her to (insofar as someone could in that situation) reach a detached view of him. I therefore do not think that she would have prioritised her relationship with him or protecting him over the need to protect C. Thus if there had been anything which aroused her suspicion I believe she would have said so.

93. The local authority do not dispute the father's love for his daughter. Of course parents who love their children are still capable of assaulting them; frustration, tiredness, the effect of drink or drugs, mental health or underlying personality traits, stress (non-exclusive). All might cause an otherwise loving parent to assault their child in a 'moment of madness' or loss of control. An extreme example of one factor or a combination of others might combine and lead an otherwise loving parent to subject their child to a prolonged act of seriously harmful violent behaviour. The evidence seems to me to establish not simply that the father loved C but also that he was attuned to her and he is by nature child-centred. Whether this is part of his personality as a result of the absence of his own father during his childhood or for other reasons does not matter. The fact that he is demonstrably sensitive to C's needs and to how she might be feeling does matter. The evidence shows that during the most stressful period following C's birth when the mother was incapacitated to some degree as a result of the difficult birth and when both parents were adjusting to the reality of a newborn child, the father was not found wanting but committed himself to the care of the mother and C. Thereafter although there was clearly a change in the nature of his relationship and he was gutted or upset by this he understood what was happening. He did not blame C. He may at one stage have felt distanced from her and at times did not try as hard to engage with her being put off by her preference for her mother. However I accept that following C being injured by the baby bouncer on his watch that it acted as something of a wake-up call to him and he thereafter made great efforts to rekindle C's attachment to him. Although there were few occasions when he looked after C alone (this being very much a unit of three when he was not working) he clearly did and for extended periods of time. The example of him trying for an hour and ½ to settle C would it seems to me have been more of a test for him than changing her nappy on 1 June. His love for his daughter, his child-centred attitude, his track record of withstanding stressful periods of time with her of course do not mean he could not have assaulted her on 1 June 2018. However they do lend support to that being an improbable event. Fathers seriously assaulting their children particularly by the sort of prolonged deliberate action involved in chest compression and mouth/nose obstruction is in any event improbable. However improbable does not mean impossible.

94. As I have said, I found the mother to be an honest and truthful witness. Her account of events on 1 June was consistent and coherent. It tied in with the father's account it tied in with the contemporaneous evidence. It was repeated several times on the day

to treating medical staff. Of course she was not in the room with the father and C. She was upstairs for a period of minutes whilst the father was downstairs with C. She was doing her hair and getting changed. The timeframes would allow the father to have assaulted C in the way posited by the medical possibilities. However her account is of C beginning to cry when she reached out for her during the sandwich kiss and the mother left her with the father whilst she went upstairs. She says she could hear C crying whilst she was upstairs. The medical possibilities for the nature of an assault on C require a period of between 15 to 45 seconds in which C's chest was compressed and her mouth nose occluded (or one of the other asphyxiation possibilities) when she self-evidently would have been silent. This would then have been followed by a highly significant demonstration of distress with her crying and sobbing and gasping for breath for a period initially intense and diminishing over minutes. There is simply no suggestion of this in the mother's evidence and I am satisfied that she would have both noticed this, she being attuned to C, and that she would have mentioned it as being obviously relevant in a potential suffocation situation. An assault by the father of the nature posited is therefore inconsistent with her evidence. Her evidence of the father's response thereafter, to the reddening of her face and the swelling and appearance of the petechial haemorrhages was also of him being genuinely alarmed in the same way that she was. Of course he may be a consummate actor who was capable of putting on this front, perhaps following her lead, and maintaining it to her and her family and to medical professionals over the coming minutes and hours and since. I do not think that the mother's character or the nature of her relationship with the father is consistent with her being capable of being completely duped in this way. She demonstrated a degree of emotional intelligence and insight which I conclude would have allowed her to, if not see-through such behaviour, at least to have recognised something that jarred and which would when she reflected have caused her to question the father's role. That she has not suggests she considered he was genuine and thus that he was. That of course would also be inconsistent with him having perpetrated an assault. Neither she or anyone else noticed anything about his behaviour from 3:00pm onwards that was inconsistent with him being genuinely concerned that C had suffered some sort of allergic reaction or might be suffering from meningitis.

95. Although perhaps not quite as compelling a witness as the mother I also found the father to be a credible and honest witness. It was perhaps self-evident that he was the main focus of the allegation that C had been subjected to a very seriously assault. There was also the fact that a previous finding had been made against him. That he was more nervous under the spotlight was understandable. His account was also consistent internally and over time to the mother, to medical staff, to the police and to the court. Yes he missed out reference to C's distress but as I have explained above I do not consider this was part of a strategy. Nor do I consider any dishonesty to amount to corroboration in the enhanced Lucas sense. His love for and attunement to his daughters needs as I have said above make him an unlikely candidate for committing the sort of serious assault involved here. This is not a momentary loss of control although Ms Howe put to the father that this was perhaps a short period in which he lost control out of frustration and squashed C to the mat to prevent her wriggling and to keep her quiet. This scenario does not seem to me to be consistent with the medical evidence which all points to a more prolonged and deliberate form of assault. It is conceivable that even the best parent might in the perfect storm of circumstances lose control in such a way although happily it is rare. The likelihood of a good parent losing control for such a period as to compress the chest and occlude the mouth nose in the way necessary is much more remote; still less the deliberate decision to perpetrate such actions. His behaviour to the mother and to C immediately following the emergence of the petechial rash and its development was not consistent with him having assaulted her. His account of the afternoon and in particular the

minutes immediately preceding the nappy change and during the nappy change has remained consistent throughout and is consistent with the mother's account. I do not think that his having bagged up the nappy and put it in the bin is inconsistent with him having been significantly worried about C's presentation. Whether her presentation was a result of an assault by him or for other reasons the evidence establishes that he was clearly worried and if he says he put the nappy in a bag and in the bin as he took C upstairs I accept that is what happened. It tells me nothing about whether he had assaulted C or not.

96. Merging all of this evidence with the medical evidence provides me with an answer to the ultimate question of whether the local authority have established on the balance of probabilities that the petechial haemorrhages were inflicted injuries and who was the perpetrator. In reality after the end of the evidence the mother could be excluded. On any account she was not a candidate for being a perpetrator. In answering the ultimate question no single factor dominates the evaluation or the landscape. There are a multitude of individual components to be woven together. In a case where the medical evidence provides a compelling answer on causation; particularly where it is based on either long established understanding or on scientific testing it might require a compelling account by the carers and perhaps others to lead the court to conclude that on the balance of probabilities the injury was not inflicted. This is not such a case. Of course the converse is that where the medical evidence is unclear as to causation the court might still find inflicted injury on the basis of the totality of the evidence. The Court of Appeal recognised this and it is well established in the case law as set out in Mr Newton's closing note.

Conclusion

97. In this case the combined effect of all of the evidence, viewed not in it separate compartments but melded into a unified whole and particularly having regard to the credible accounts given by the mother and the father and the evidence in general as to their nature, the inherent probabilities and the uncertainties within the medical evidence balanced against in particular those features of the medical evidence which supports inflicted injury as being more likely than any other cause lead me to answer the ultimate question in the negative.

98. No, the local authority has not established on the balance of probabilities that the petechial haemorrhages that C was found to have on 1 June were an injury inflicted upon her by the father. Certainly not by the mother. I am unable to determine how the petechial haemorrhages were caused. I very much wish I were able to assist C, the parents, the wider family and the local authority in being able to provide a definitive answer. C's situation has been delved into deeply by treating medical professionals, social workers, medical experts, lawyers and the courts. No reasonably sized stone has been left unturned and yet an answer emerges not. No one is to blame for this. It seems to me throughout that everyone has done their utmost to the best of their abilities to assist in finding an answer, in particular the medical witnesses but also the parents and the justice system itself. Occasionally (and happily it is very rare) even the best endeavours of everyone concerned are not capable of producing a clear answer as to what happened. Perhaps at some later stage developments in medicine or clarification of C's physiological make up or some other matter might give an answer or at least shed more light on the probable answer. But perhaps not. The absence of a clear answer is bound to leave a sense of discomfort particularly for the parents and for the medical witnesses but also for the legal and social work professionals. Uncertainty is instinctively uncomfortable for the rational being. Even more so for the parent worrying for the child.

99. For C though the end result of the application of the binary legal process results in a zero being applied to her mother and father. This means that neither of them subjected her to an assault which caused the petechial haemorrhages. Where this leaves C and her parents is not a matter for me but for them and the future.

100. That concludes my judgment.