**SHERIFFDOM OF LOTHIAN AND BORDERS AT LIVINGSTON**

**[2019] SC LIV 60**

B1/16, B2/16 & B3/16

JUDGMENT OF SHERIFF SUSAN A CRAIG

IN THE APPLICATION BY LOCALITY REPORTER MANAGER, SCOTTISH CHILDREN'S REPORTER ADMINISTRATION, FOR THE SHERIFF COURT AT LIVINGSTON

In Respect of the children

CC, FC, and LC

**Act: Wolff (for the Reporter)**
**Alt: Dewar, Advocate (for CC)**
**Gilchrist, Advocate (for FC)**
**Black, Solicitor (for LC)**
**Wild, Advocate (for JC – mother)**
**Mr C (father) self-represented**
**Marion Foy, Safeguarder**

Livingston, July 2019

**Introduction**

[1] These were applications for proof in terms of section 67 of the Children's Hearings (Scotland) Act 2011 in respect of three children, CC, FC and LC. There were three disputed facts, all connected to the Reporter's proposition the children's mother, JC, had subjected the two older children, CC and FC, to unnecessary medical treatment. Although not presented as a fact for determination, the Reporter's underlying theory was this was a case of Fabricated and Induced Illness (FII).

[2] The oldest child, CC, was a type one insulin dependant diabetic. On a daily basis she received injections of Novorapid – a fast acting insulin taken immediately before meals – and Levemir – a slow acting insulin taken twice a day to maintain background levels. For

some of the relevant time CC used an insulin pump, and at others insulin pens to deliver the appropriate dose / bolus of insulin.

[3] Over many months JC reported that management of CC's diabetes was erratic. On 15 April 2013 CC was admitted to hospital with an overdose level of Novorapid that, without intervention, would have been fatal. The levels of Levemir were also significantly higher than reported by JC but which, on their own, would not have been fatal.

[4] The middle child, FC, had gastrointestinal conditions that caused constipation, as well as a number of other difficulties reported by JC which were, in large part, not objectively observed by clinicians. FC received a variety of treatments, including powerful laxatives, and underwent invasive internal investigations.

[5] It was the Reporter's position that JC deliberately ill managed / over reported both CC and FC's conditions and deliberately administered the potentially fatal overdose of insulin.

[6] Grounds of Referral had previously been presented and were about to proceed to proof before me when they were withdrawn by the Reporter. Those Grounds included the specific fact that JC had the condition FII.

[7] The clinicians involved in the children's care were so alarmed at that decision they protested and in due course fresh grounds were presented. Those did not include the FII allegation.

[8] I case managed that application and, after 22 days of evidence and submissions, determined the Reporter had established two of the three disputed facts.

[9] Specifically I determined that JC had

- Between 1 January 2013 and 14 April 2013 deliberately repeatedly administered CC with amounts of insulin in excess of the required level (fact 2)

- Between 14 and 15 April 2013 deliberately repeatedly administered CC with amounts of inulin in excess of that required to treat her diabetes (fact 3)
- Put CC's health at risk amounting to a Schedule 1 offence (per the Criminal Procedure (Scotland) Act 1995)
- Wilfully ill-treated CC in a manner likely to cause unnecessary suffering or injury to health, in terms of section 12 of the Children and Young Persons (Scotland) Act 1937

[10] In relation to FC I did **not** find the disputed fact (fact 5) established. The Reporter had asserted that between 1 February 2006 and 24 May 2013 JC deliberately exaggerated and falsely reported the degree of constipation suffered by FC to such an extent she caused FC to be prescribed unnecessarily high doses of laxatives, to attend numerous unnecessary hospital appointments and invasive surgery over a prolonged period of time. I concluded the medical evidence did not support that fact.

[11] However I found both FC and LC had a close connection with a Schedule 1 offender and that grounds were established on that basis in relation to each child. I directed the Principal Reporter to arrange a Children's Hearing to decide whether compulsory supervision orders were required.

[12] The proof commenced on 7 June 2016 and ran for a further 21 days concluding on 13 June 2017. I heard from seventeen witnesses and had the benefit of various Joint Minutes.

[13] It was a busy court. Counsel represented JC, CC and FC. The reporter was represented by a solicitor and was assisted by another. LC was represented by Mr Black, a solicitor. He had been the children's safeguarder in the earlier proceedings but must have been satisfied that did not cause him conflict and therefore could act for LC in these proceeding. The children's safeguarder, Marion Foy (who had been appointed just before

the proof following the illness of the former safeguarder) represented herself, as did Mr C. JC attended each day of the proof, as did the children, although CC was absent during her mother's evidence.

**Findings In Fact**

[14] Having regard to the evidence I heard I found the following facts admitted or proved:

1. CC (born – **redacted**), FC (born – **redacted**) and LC (born – **redacted**) are the daughters of JC, and Mr C. As at the date of the proof, all ordinarily live with JC.
2. Between May 2013 and around June 2014 FC and LC were subject to Interim Compulsory Supervision Orders (ICSOs) and required to live with their father, Mr C. JC's contact with the children was supervised. When the ICSOs were terminated in June 2014 they returned to live with JC.
3. Between June 2013 and March 2015 CC was subject to an ICSO requiring her to live with her father. JC's contact with her was supervised. When the ICSO was terminated in March 2015 she returned to live with JC.

**Disputed Facts 2 and 3**

4. In early November 2010 CC was diagnosed as a type 1 insulin dependent diabetic.
5. Type 1 diabetics are unable, naturally, to produce the hormone insulin required to metabolise glucose in the blood so it can be absorbed as energy. Untreated, the absence of insulin will cause a type 1 diabetic to become ill and, ultimately, is fatal.

6. In non-diabetics blood glucose levels will normally be between 4 and 5.5 mmol/L. Type 1 diabetics use insulin injections in an effort to maintain their blood glucose levels at around those levels. A reading below 4 mmol/L is, medically, hypoglycaemia, and occurs where there is too little glucose in the blood. That can be caused by a number of factors including an excess of insulin.
7. An untreated prolonged hypoglycaemic state (or "hypo") will lead to unconsciousness and is potentially fatal.
8. Hyperglycaemia occurs when blood glucose levels are elevated i.e. where there is insufficient insulin. Even an extended period of hyperglycaemia is not immediately harmful to the health of a type 1 diabetic albeit it may cause longer-term health problems should it persist for several months.
9. Hypoglycaemia can immediately endanger the patient's health; hyperglycaemia cannot.
10. In 2013 CC used two different types of insulin – Novorapid and Levemir. She continues to use them.
11. Novorapid is a fast acting insulin taken several times a day just prior to eating.
12. Levemir is a longer acting insulin taken twice a day at around 12 hour intervals, in the morning and evening. It maintains background levels of insulin and an overdose will not cause hypoglycaemia.
13. At 00.45 on 15 April 2013 CC was admitted to hospital with severe hypoglycaemia.
14. The levels of Novorapid found in blood samples taken on admission were substantially elevated to 8600 pmol/l.

15. That was an intentional non-accidental overdose of Novorapid at levels that were potentially life threatening.
16. Had CC not received appropriate medical treatment she was at substantial risk of serious harm, injury and it could have been fatal.
17. JC deliberately administered the injections of Novorapid that resulted in that overdose and thereby endangered CC's life.
18. Insulin can be delivered either by subcutaneous injection using an insulin pen (into which individual cartridges of insulin are inserted) or through an insulin pump attached to the patient's body. Where a pump is used no separate injections of insulin are required or should be given.
19. At various times CC used insulin pens and at others was on a pump. For some of the time between 1 January 2013 and 14 April 2013 CC was on a pump. Its use was stopped and started under medical direction following concerns she was receiving excessive non-therapeutic doses of insulin.
20. When not using the pump CC used pens and was using them in April 2013.
21. An insulin pump records the volume and frequency of the insulin delivered. Data is stored on the pump's hard drive. Although JC was not aware of it, such data can be downloaded remotely and cannot be deleted from the hard drive even if the pump is turned off.
22. Whether using pens or a pump, a type 1 diabetic, such as CC, adjusts the amount of Novorapid taken immediately prior to a meal depending on a variety of factors including the size of the meal (specifically the amount of carbohydrates), activity levels, general health and their current blood glucose ("BG") level.

23. Current BG levels are found by using a finger prick to produce a drop of blood that is then applied to a testing strip on a blood glucose meter. The patient calculates the amount of insulin required to maintain a healthy level of blood glucose, and administers that dose.
24. The Levemir dose, taken twice a day, generally remains constant with little variation day to day.
25. Patients have a separate insulin pen for each type of insulin. The pens and the insulin cartridges are colour coded to prevent mix up.
26. Pens have a dial at the top to select the volume of insulin and prime the pen ready for use. With adult pens the maximum that can be dialled up at one time is 60 units. In paediatric pens the maximum is 35 units.
27. The patient presses down on the dial to discharge the insulin subcutaneously, usually through leg or stomach muscle. That is not an instantaneous process but takes a second or two; the greater the volume of the dose, the longer the time taken. It involves the person administering the injection to exert enough pressure on the top of the pen to keep the needle (a small pin non intravenous needle) in place.
28. When using a pump a patient still requires to carry out the calculation to determine the correct dose of insulin. The patient then programmes the pump using a series of button presses to deliver a bolus of insulin in the required volume.
29. A pump cannot accidentally deliver boluses of insulin. Buttons have to be pressed in a pre-set sequential order, with a different sequence for different

actions. Unless the correct sequence is completed in full the pump will not deliver a bolus of insulin.

30. As a safety feature, pumps are programmed with a pre-set maximum limit of 20 units of insulin deliverable in a single bolus. Should a patient require a bolus greater than 20 units the patient has to complete the button pressing sequence successfully and then repeat the full sequence a further time before the second bolus will be delivered.

31. The pump delivers a basal background level of insulin in addition to that required at mealtimes. That can be temporarily adjusted – increased or lowered – if the blood glucose has risen or fallen. That is a temporary and short term measure to bring levels back to a healthy range; it is not a therapeutic measure.

32. One unit of Novorapid is required for every ten grams of carbohydrate in a meal. A slice of bread is fifteen grams.

33. Both CC and JC had tuition in diabetes management at the time of her diagnosis. They received on going support and advice, both through regular outpatient appointments and via the diabetic nursing team at the Royal Hospital for Sick Children ("RHSC") in Edinburgh. In addition, when CC was placed on the pump they both were given tuition and guidance in its use.

34. Following diagnosis, and throughout, JC regularly contacted the diabetic team reporting frequent and recurring issues with CC's diabetes. She reported regular incidents of hypoglycaemia for which she sought advice and guidance.

35. For several months prior to March 2013 CC's treating physicians were concerned about what they saw as anomalies in JC's reports of CC's management of her condition. In late March 2013 it was decided the next time JC reported CC was

hypoglycaemic she would be admitted to hospital. The plan was to carry out more detailed and specific blood tests than would normally be taken in a standard admission. Specifically, they requested the amount of insulin in CC's blood be measured.

36. Those involved in CC's care did not understand why the management of her condition – as reported by JC – was so erratic at home and yet relatively easily managed when she was into hospital. They wanted to understand why that might be. By that stage they had a suspicion that CC was receiving more insulin than was being reported and that JC might be responsible.
37. That led to the blood tests taken on her admission on 15 April 2013.
38. Although CC presented as alert when admitted she was medically hypoglycaemic.
39. Diabetics who are frequently hypoglycaemic have a blunted response such that external signs of low blood sugar are absent or reduced. However, the risks associated with hypoglycaemia remain the same irrespective of any blunted response.
40. CC had felt unwell for much of the day on 14 April 2013 and had been listless and lying on the sofa that evening. She has very little memory of the later part of the evening but can remember going by car to hospital.
41. Low blood glucose causes short-term memory loss, and that memory remains lost once normal levels are achieved.
42. Earlier in the evening of 14 April 2013 JC called the hospital's diabetic nursing team and reported CC was hypoglycaemic. Advice was given about treatment.

At just before 11 pm JC called again to report that CC's blood glucose levels remained low and were 2.9.

43. JC was told to bring CC into hospital. JC arranged for her father, CH, to come from his home to look after FC and LC. He arrived just before midnight. He had no opportunity to inject CC with the overdose of Novorapid.

44. JC and CC left very shortly after CH arrived. They drove to Edinburgh. The journey took between 30 to 40 minutes during which CC and JC were alone. They arrived at 00:45 and CC was admitted via the Accident and Emergency Department.

45. The blood samples taken following admission showed that at 01:33 on 15 April 2013 CC had 8600 pmol/l of Novorapid in her system. Having regard to Novorapid's peak and half-life the time and volume of Novorapid could reasonably be estimated.

46. Following subcutaneous injection, Novorapid reaches a peak level in the blood within 40 – 50 minutes.

47. After reaching its peak Novorapid's half-life is around 154 minutes.

48. If the reading taken at 01:33 was at Novorapid's peak, CC would have received a dose of around 170 units at around 00:30, or a higher dose if multiple smaller doses had been given. That estimated dose was likely to be higher if the measured level was before or after the actual peak.

49. Having regard to a 30% variability in peak levels, the overdose was likely to be between 120 and 220 units of Novorapid.

50. Whichever was the accurate reading, it was at least 15 and as much as 30 times the dose CC would require for her average carbohydrate-rich meal.

51. That would require between two and four separate injections at the maximum dose of 60 units, if an adult pen was used, and significantly more if was a paediatric pen was used.
52. That was an intentional overdose.
53. The length of a hypoglycaemic event is as important as the low level. There is an increased risk of long-term brain damage and death if blood sugar levels stay low for a prolonged time.
54. The hypo CC experienced on 15 April 2013 was a prolonged event.
55. Following admission, CC's blood glucose levels remained low and she remained in a hypoglycaemic state for several hours and well into the day despite receiving a number of boluses of glucose administered by way of an intravenous drip.
56. That so much was required for her blood glucose to rise, and stay risen, was consistent with excessive levels of insulin in her system.
57. The doctor who admitted CC had never before treated a patient requiring so much glucose to stabilise them. It was unique in her experience.
58. There was no medical reason for CC to have received any injection of Novorapid at any point after JC reported she was hypoglycaemic. CC had lowered blood glucose levels. Those had to rise to bring her out of the hypoglycaemic state. Administering insulin would have the opposite effect and would have further lowered her blood glucose levels.
59. JC knew that. She had sought advice from the hospital in the evening of 14 April 2013 about the amount of Levemir she should administer given CC's lowered blood glucose.

60. JC was told to reduce the Levemir dose to 15 units and later reported administering it to CC "despite reservations" at 21:55 on 14 April 2013.
61. The amount of Levemir in CC's blood taken on admission was significantly in excess of the dose JC reported she'd given.
62. Levemir could not have been the cause of the prolonged hypo.
63. The significantly elevated level was of Novorapid. It caused the prolonged hypo.
64. Usually, but not exclusively, CC self-administered injections of Novorapid. A Novorapid injection had been given earlier in the evening of 14 April 2013 when the family were eating a Chinese meal. Whether given by CC or JC it was not the injection that caused the overdose.
65. Between 1 January 2013 and 14 April 2013 JC repeatedly administered CC with amounts of insulin in excess of the level needed to treat her diabetes, and that put her health at risk.
66. During part of that period CC was on the insulin pump.
67. Following their involvement, the police contacted Medtronic, the manufacturer of the insulin pump used by CC, and instructed an analysis of the data downloaded from the pump. A report was produced by Emma Jane Day, Medtronic's lead education clinician.
68. Ms Day found that during September and October 2012 high doses of insulin were given without corresponding data indicating they were required. She found the pump had been switched off for no apparent reason. There were multiple repeated blood glucose tests that had been carried out without appropriate action being taken to respond to the results. Temporary basal rates had been set at levels used only by ultra-sportsmen.

69. On 27 September 2012 CC received doses of insulin totalling 173.3 units given over a short period of time. The amount of carbohydrate required to balance that insulin would be at least 35 slices of bread or 18 slices of pizza. Ms Day had never previously seen such a high level uploaded from a pump.

70. If that amount of carbohydrate had not been eaten, the bolus of insulin given would cause hypoglycaemia.

71. From late October 2012 to mid-November 2012 JC claimed the pump was in use but no data was recorded. That was unique in Ms Day's experience.

72. Between 20 and 27 January 2013 and between 1 and 5 March 2013 there was significant manipulation of the pump. The pump's delivery of insulin was deliberately increased and then decreased with the effect of inducing hypoglycaemia and then restoring safe blood glucose levels.

73. The temporary basal rate was set at very high levels – 200% of the usual level – sometimes for ten hours at a time, doubling the amount of insulin CC would normally require to maintain a healthy blood glucose level. That induced hypoglycaemia. That occurred at times when CC's blood glucose levels were already recorded as low.

74. Several hours later the temporary basal rate was drastically reduced, down to 30% of its usual level, which had the effect of ending the hypo caused by the elevated rate.

75. There was a pattern of endangering and then saving CC. It was irresponsible and endangered CC.

76. That pattern of behaviour occurred either in the middle of the night or at times when CC was compromised by existing low blood glucose and unable to

complete the sequence of button presses necessary to alter the temporary basal rate. At the levels recorded the intervention of a third party would be required. On several occasions of the pump being manipulated, CC's recorded blood glucose levels were so low she would have been in a semi-conscious if not unconscious state. CC would not have been able to manipulate the pump at those times.

77. Only CC and JC ever input data into the pump.

78. There were other forms of manipulation of the pump that caused it to deliver excessive, non-therapeutic doses of insulin.

79. On 20 January 2013 at 01.33 the temporary basal insulin was not turned off despite CC having low blood glucose levels, with the consequence it caused and extended the length of CC's hypoglycaemia.

80. On 25 February 2013 and, separately, on 4 March 2013, there were between 13 and 15 parallel blood glucose readings recorded, in quick succession, showing very high and then very low blood glucose readings. It was not possible for those readings to have come from the blood of the same person or, alternatively, for it to have been blood that was tested.

81. As the pump depends on the accuracy of the blood glucose readings, inaccurate readings have the potential to cause harm. If an inaccurate reading suggested a high blood glucose level that would prompt the user to give an additional dose of insulin. If that prompt was followed, a potentially dangerous dose of insulin would be delivered.

82. Between 20 January 2013 and 5 March 2013 JC deliberately manipulated the pump so as to endanger and then save CC.

83. Between 7 March 2013 and 15 April 2013 JC made a number of reports to the diabetic team that caused them concern.

84. On 26 March 2013 JC reported CC had what she described as "another extreme episode of hypoglycaemia" during the early hours of the morning.

85. CC was admitted to hospital for observation. She remained there until discharged on 31 March 2013.

86. During her admission CC was generally well with her blood glucose levels on target. No biochemical or other reason was found to explain the reported hypoglycaemia.

87. CC did not experience hypoglycaemia while in hospital until on 29 March 2013 when she was allowed to be in the unsupervised company of her mother for a visit to the Museum of Scotland.

88. 15 minutes after arriving at the museum JC reported CC's blood glucose level had dropped to 2.4. They returned to the hospital.

89. The continuing reports of hypoglycaemia when at home contrasted with CC's health when in hospital. That led to the decision to admit CC for detailed blood analysis at the next reported hypoglycaemic episode.

90. A number of the hypos were caused by JC deliberately injecting CC and manipulating the pump so that she received non-therapeutic doses of insulin.

**Disputed Fact 5**

91. FC has a condition that resulted in constipation. She received treatment over a period of years, and was prescribed a variety of medications.

92. FC's treating doctors decided the amount prescribed, as well as the choice of medication, from time to time. They decided those matters based on the information provided to them at consultations, principally by JC.
93. From time to time FC was examined by the treating doctors and underwent various investigations, examinations and procedures, including procedures conducted under general anaesthetic and which involved taking samples of her bowel and intestine.
94. One – a slow transit marker study – identified FC had a slow intestine that resulted in a degree of constipation and for which medication was given.
95. None of the other investigations, examinations or procedures identified any other condition that might result in constipation or intestinal issues.
96. None of the treating doctors were alarmed or concerned by that absence, finding it to be common place and unremarkable. Many of the investigations were intended to exclude conditions, which they did.
97. After several years of treatment, directed and decided by the doctors, FC's condition improved such that the amount of medication taken by her significantly reduced and she is now, generally, well.

**Findings in Law**

I made the following findings in law -

1. JC is an offender to whom schedule 1 to the Criminal Procedure (Scotland) 1995 applies.
2. In terms of section 67(2)(b) of the Children's Hearing (Scotland) Act 2011 JC has committed a schedule 1 offence against CC in a manner likely to cause

unnecessary suffering or injury to health in accordance with section 12 of the Children and Young Persons (Scotland) Act 1937.

3. In terms of section 67(2)(c) of the Children's Hearing (Scotland) Act 2011 CC, FC and LC are, or are likely to become, a member of the same household as a person who has committed any of the offences mentioned in Schedule 1 of the Criminal Procedure (Scotland) Act 1995.

**The Evidence of the Overdose**

[15] I had the advantage of managing the case from the outset. Initially it appeared there was no scope for agreement but following a number of pre proof hearings where parties were encouraged to focus on the issues in dispute, Joint Minutes eventually emerged.

[16] It was clear the correct analysis of the blood samples taken on admission was a central issue in the case. There was dispute about the test results and it was suggested the incorrect assay had been used (producing a false result i.e. there had been no overdose). There was an insistence on behalf of JC and CC that the blood samples be re-tested.

[17] As they were in the custody of the police on behalf of the Crown (pending a possible prosecution for attempted murder) this resulted in satellite procedure involving recovery of the samples and ensuring their safe custody and passage to a laboratory in Cologne for examination by a Dr Thevis (there was no suitable UK based lab).

[18] Once that analysis was completed a process of "hot tubbing" allowed a diabetology joint statement to be produced. That reduced the dozen or so areas of dispute between the experts to a single point – who had administered the overdose? – and that was a matter for me.

[19] That joint statement comprised a statement from a Dr Darzy and Dr Bath in which it was agreed that on admission to hospital on 15 April 2013 CC had a substantially elevated level of Novorapid insulin measured at 8600 pmol/L, and that amounted to an intentional overdose.

[20] The statement agreed that a dose of around 170 units of Novorapid had been given at around 00.30 on 15 April 2013, (or a higher dose if multiple smaller doses had been given earlier than 00.30). Allowing for variability, it was agreed the estimated overdose was likely to be between 120 units and 220 units i.e. between 15 and 30 times the dose needed by CC for an average meal. That would have required between two and four separate injections of the maximum amount deliverable by a 60 unit Novorapid pen, and more if a paediatric pen had been used.

[21] Finally, the joint statement agreed it was likely CC had received a dose of Levemir higher than JC reported giving at around 21.55 on 14 April 2014.

[22] Accordingly by the time of the proof it was an agreed fact that CC had received a non-accidental overdose of fast acting insulin, as well as more slow acting insulin than had been reported by JC. What was not agreed was who had administered that insulin. That was the central issue in the proof.

**The Evidence Generally**

[23] I heard from a number of witnesses, as follows:

- **DC Bowerbank -** spoke to the investigations carried out by the police over a period of time, including a number of joint investigative interviews with CC and FC. His evidence was principally scene setting and providing background. It was not seriously challenged.

- **Mr C** – he spoke to a number of matters including the time the children lived with him – from May 2013 in respect of FC and LC and June 2013 in respect of CC – when they were all subject to ICSOs – until June 2014 in respect of FC and LC when their ICSO was terminated, and around March 2015 when CC's ICSO came to an end.

He gave evidence about various conversations with JC about the children's health, the cost of treatment and medication, as well as a telephone call he had with her shortly after CC was admitted to hospital in April 2013. It was **not** his evidence that JC made an admission to him in the course of that conversation and could not remember her saying she had repeatedly injected CC with insulin. Although there was other evidence about that admission, I preferred Mr C's on the point.

Mr C was closely and rigorously cross-examined, the thrust being he cared more for money than his children and had absented himself from the family at the material times. He largely accepted the latter proposition – he frequently worked in London and, once separated, saw the children only at weekends.

He did not accept the former proposition; his position instead was the family unit was mired in debt, principally due to JC's profligacy, and he was working to pay that off. He was clear he did not feel JC was helping that situation but was adamant he loved his children and wanted a good relationship with them.

I formed a favourable impression of Mr C and, overall, found him to be credible and reliable. His detailed recollection of financial matters was no different from the detailed evidence he gave about other matters; I took nothing adverse from that and instead he impressed as a reliable historian.

- **Patricia Pohl** – Mr C's partner for several years. She spoke to a telephone conversation that took place between Mr C and JC shortly after CC's admission to hospital in April 2013. She said she overheard JC say "I injected, I injected, I injected but her levels didn't come up."

Ms Pohl also spoke about her observations of the children when they lived with Mr C while the ICSOs were in place and their relationship with her. He was a good and caring father, she said, who had upended his life to move back to Scotland to look after his children. She had had a good relationship with them, but that had now soured. Ms Pohl's evidence was much less focused than Mr C's, frequently going off at tangents and given to prolixity. At times she was difficult to follow. Her evidence about the telephone conversation was confused and I preferred the version given by Mr C.

- **Fiona Wilson** – is a Children and Family social worker working for [**REDACTED**] Council. She and DC Bowerbank interviewed CC as part of the investigations. She was also the allocated social worker for the family, albeit that changed over time.

Ms Wilson spoke to the explanations given by CC and JC in relation to the April 2013 overdose as well as the child protection measures put in place thereafter. She attended FC's medical examination by Dr Kidd, although didn't see the physical part of that examination. She said FC was vague in her explanations about her condition / medication, and looked to JC for prompting.

When she visited the family home she saw large amounts of medication and numerous notes with expressions of love stuck to walls in every room in the house. During contact (which she supervised) JC inappropriately mirrored the children's reactions when she should have been supporting them. Ms Wilson had no concerns about the children when

they were in Mr C's care but as soon as they were returned to JC they were placed back on the "at risk" register.

Ms Wilson was robustly tested in cross but maintained her criticisms of JC – that she lacked candour, had an unusual and unhealthy relationship with the children and over-medicalised them. In her investigations, the explanations offered by JC had all been discounted by health professionals involved. She criticised JC for raising a residence action when there was an ICSO in place requiring they live with their father, and rejected the suggestion she (Ms Wilson) did not speak to the children on an age appropriate basis. She had, she said, significant concerns about JC but that was a professional view based on her years of experience.

Notwithstanding close and searching questioning Ms Wilson remained a clear and articulate witness. She was able to provide a credible account of her involvement with the family, her observations and concerns. I found her to be an impressive witness on whom I could rely.

- **Professor Peter Milla** – is Emeritus Professor of Paediatric Gastroenterology and Nutrition at the UCL Institute of Child Health, University College London. He was the Director of the Department of Gastroenterology at Great Ormond Street Hospital for Children from 1983 to 2003. He holds degrees of Bachelor of Medicine, Bachelor of Surgery, Master of Science (Biochemistry) and is a Fellow of the Royal College of Physicians of London and of the Royal College of Paediatrics and Child Health. He was President of the European Society for Gastroenterology, Hepatology and Nutrition and both Chairman and Treasurer of the United European Gastroenterology Federation at various times. He established the UK protocol for the investigation of Fabricated or Induced Illness

("FII") has written and lectured extensively on the subject and regularly gives expert evidence about FII.

In May 2014 he reviewed FC's medical and other records at the request of Police Scotland. He had not met, or treated, any members of the family. Although there were a large number of medical referral letters, each time FC was examined no abnormalities were found. There was no objective evidence she had any condition other than a slow colonic transit and some faecal retention. She did not have acquired mega colon notwithstanding that diagnosis appearing in her notes.

Professor Milla's conclusion was that JC had exaggerated and / or falsely reported FC's condition. That had resulted in her being prescribed what he described as "heroic" quantities of laxatives and other medication, had undergone a biopsy and an endoscopy. In all his years in practice he had never had to prescribe such enormous amounts of laxatives to a child. Once FC took over responsibility for her medication the amount of medication dropped sharply.

The medication would result in very runny smelly liquid stools, with a degree of anal leakage, stomach-aches and cramps. While FC would have a degree of constipation associated with a slow transit that could have been, and ultimately was, managed by significantly lower doses of medication given on occasion and only when needed.

Professor Milla was a witness with impeccable credentials but could only make observations based on the records. His evidence and conclusions were not supported by FC's treating doctors – Drs Boyle, Tybulewicz and Gillet and, ultimately I preferred their evidence and conclusions.

- **Dr Louise Bath** – is a consultant paediatrician and specialist in paediatric diabetes and endocrinology. Dr Bath is based at the RHSC at the NHS Lothian

specialist paediatric diabetes unit that treats diabetic children across the Lothians. She was in overall charge of CC's treatment.

Dr Bath spoke to, inter alia, production 4, a summary of factual information extracted from CC's medical and nursing records and a chronology of events leading to CC's admission in April 2013. There was no serious challenge to its accuracy and content. She also spoke to the joint diabetology statement, explaining the blood samples taken from CC on the night of her admission had been tested by Dr Mario Thevis of the Centre for Preventive Doping Research at the Institute of Biochemistry at the University of Cologne, Germany and spoke to his report. She explained Dr Thevis carried out insulin doping tests on behalf of the International Olympic Committee.

CC's substantially elevated level of Novorapid amounted to an acute life threatening event, was an intentional non-accidental overdose and would have been life ending had CC not been given substantial volumes of glucose in hospital, said Dr Bath. She had never experienced a patient, adult or child, requiring the amount of Novorapid received by CC on 14 / 15 April 2013, and her blood glucose levels were so low she would have been only semi-conscious at best so could not have self-administered the necessary injections.

Dr Bath gave extensive evidence about the nature and effect of type 1 diabetes as well as treatments through insulin injections, administered by pen injection or through an insulin pump. She described the differences between fast and slow acting insulin, and demonstrated the use of the colour coded insulin pens explaining they come in adult and paediatric sizes. The maximum dose deliverable by an adult pen was two to three times more than an adult patient would ever require on a single occasion. All her paediatric patients used the smaller pens with just over half the maximum volume of an adult pen.

Dr Bath gave evidence about the mechanics of calculating the amount of insulin a patient takes depending on what is to be eaten and that one unit of Novorapid is required for every ten grams of carbohydrate. She explained that CC's average meal would require 8 units. Dr Bath also explained that hypoglycaemia occurs when blood glucose levels are below 4 mmol/L with mild hypoglycaemia at between 3 and 4, below 3 being more severe and at below 2.5 patients can experience hypoglycaemic seizures and unconsciousness. As she described it, the length of a hypoglycaemic event is as significant as a low level with a risk of long-term brain damage from a prolonged episode. This was, she said, an excessively prolonged episode.

Once normal levels are achieved the hypoglycaemic patient will have little, if any, memory of the incident; that memory is not recovered once their levels rise. Dr Bath also described the blunted response experienced by those regularly hypoglycaemic which reduces external signs of levels dropping but is no less harmful.

Dr Bath spoke to the training and support given to CC and her mother on diagnosis and said she was surprised it took CC so long (9 weeks) to return to school. That was far longer than any other patient and she would usually expect a child to return to school a week after diagnosis.

Dr Bath's evidence addressed the concerns she and her colleagues had about anomalies in JC's reports of CC's diabetes management – reports of multiple and prolonged incidents of hypoglycaemia in circumstances that were highly variable and difficult to explain. She said some were physiologically impossible and only explainable by falsely manipulating the data. When CC was in hospital none of the issues reported by JC occurred.

Dr Bath was an impressive witness and gave her evidence with care and deliberation. I was satisfied I could rely on it.

- **Dr Helen Brotherton** – now a consultant in general paediatrics, Dr Brotherton was the on duty doctor at the RHSC when CC was admitted on 15 April 2013. She took the blood samples and a history, reporting that JC said she gave CC a dose of 15 units of Levemir at 21.50 the previous evening. JC was asked for CC's insulin pens but was told she did not have them, and thought she might have thrown them away. Dr Brotherton found that surprising.

Dr Brotherton also spoke to a diabetic's blunted response which she said could produce a "feedback loop" response so a patient might appear to be well but was in fact hypoglycaemic. She described as "unique" the volume of glucose given to stabilise CC's blood levels.

Dr Brotherton was a cautious witness who was not prepared to be drawn on matters not directly within her knowledge, specifically on the issue of who administered the overdose injection. I accepted her evidence in full.

- **Dr Susan Kidd** – is a consultant in community paediatrics, and now has medical responsibility for child protection throughout the Lothians, working with inter disciplinary agencies. She carried out the initial child protection examinations of LC and FC, finding nothing physical of concern but was concerned about FC's inability to answer questions about her own condition without prompting and input from JC. Dr Kidd found that surprising in a child of FC's age and would have expected her to be able to explain her condition herself, without prompting.
- **JC** – gave evidence over a number of days. Evidence in chief was taken by way of affidavit. In cross JC was asked about an earlier affidavit she had provided which had a number of passages that contradicted the position she now adopted.

These were put to her but her explanations were evasive, contradictory and unimpressive.

She spoke of playing a supportive role but then spoke critically of CC saying she was "snacking" and "being disruptive". JC gave various examples of when she said CC had been secretive or untruthful. At times JC gave very detailed evidence about small, often trivial, matters while at others was unable or unwilling to recall any details (including denying events other witnesses had spoken to without challenge) about important matters.

I found JC to be an unimpressive witness who came across as untruthful and disingenuous on a number of important matters. She had difficulty in providing straight answers to simple questions. She was given to obfuscation even where the truthful response was self-evident and not against her interests. She repeatedly changed her evidence, backtracking on concessions earlier made, and, overall, did not create the impression of someone giving truthful evidence to the best of their ability. In areas of conflict, her evidence was not preferred.

- **Emma Jane Day** – Clinical Education Lead for Medtronic, a manufacturer of insulin pumps and glucose monitoring systems. Ms Day has a degree in diabetes and a Masters degree in children's diabetes. She had been asked by DC Bowerbank to analyse the data downloaded from CC's insulin pump. She was not given any background information other than CC's age and gender.

Ms Day described the operation of the pump, speaking to the different sequences of five button presses required to perform various tasks. It could not deliver insulin without manual input, explained Ms Day, and the pump was working.

Ms Day gave detailed evidence of her analysis, explaining there were a number of data sets that gave her significant cause for concern. There were high doses of insulin administered

when there was no corresponding blood glucose reading. Sometimes the pump was switched off for no apparent reason and there were other occasions with multiple, repeated blood glucose tests carried out without appropriate action being taken. At times the temporary basal rate was set at levels only be used by "ultra-sportsmen". Ms Day pointed to various dates where there was what she described as "very unusual activity" where the data entered was higher than any she had ever seen in her professional career. Ms Day said the data showed CC was experiencing extreme hypos over extended periods of time.

There was a pattern of manipulation of the delivery of insulin via the pump, said Ms Day. She described multiple occasions when the temporary basal rate was set at twice the correct level for several hours, at a time when blood glucose levels were was already low, thereby inducing hypoglycaemia. After several hours the temporary basal rate would be drastically reduced, to 30% of its usual level, which brought the hypo to an end. That manipulation was, said Ms Day, at night and at a time when CC would have been too compromised by her hypoglycaemia to operate the pump herself. It showed a pattern of endangering and then saving the patient, said Ms Day, and was alarming; it was, she said, "irresponsible dangerous behaviour".

Ms Day spoke to other ways in which the pump was being manipulated including multiple parallel blood glucose readings taken in quick succession showing very high and then very low readings. It was not physically possible for those readings to have come from the blood of the same person, she said. It was either not blood (she wondered if glucose was used) or, alternatively, was from more than one person.

Ms Day was an impressive witness who gave her evidence with care and thoughtfulness. She was entirely independent and spoke only to her analysis of the data. It was, however, entirely consistent with Drs Bath and Brotherton. It is accepted in full.

- **Dr Michael Boyle** – a GP in [**REDACTED]** and is JC's and the children's doctor. He spoke to having to various consultations with JC and of referring FC to hospital for investigation of her bowel complaint, writing prescriptions based on the hospital's instructions. He explained the quantity and frequency of the prescriptions was largely directed by the consultants and, up to a point at least, availability in the pharmacy.

Dr Boyle described the higher than average number of times he was consulted by JC who he said had "parental anxiety". He previously described the family situation as "bizarre" and observed a "monumental" amount of drugs were collected for both CC and FC. He'd expressed concern about JC to the diabetic team when they'd approached him for input with their own concerns. They were not, he had said, "barking up the wrong tree".

There was a rather defensive flavour to Dr Boyle's evidence (he spoke about a GMC enquiry about the family) and came over as someone keen to provide minimal responses to questioning. It did not taint his evidence and it is accepted.

- **Dr Peter Gillet** – a consultant paediatrician specialising in gastroenterology based at the RHSC. FC had been referred to him in 2007 from [**REDACTED**] Hospital where she had been having treatment for constipation. That had been ongoing for a while and a specialised input was sought. Dr Gillet gave evidence at some length about the medications prescribed to FC, their purpose and effect, and the investigations carried out including invasive colon and rectal examinations (with biopsies). Ultimately they had to be carried out under general anaesthetic because of FC's upset when attempted under sedation. A slow transit study confirmed a diagnosis of constipation with some faecal retention demonstrating the need for medication and treatment.

There was nothing untoward or inconsistent in JC's reports of FC's condition, said Dr Gillet, and all investigations were required to exclude conditions. The absence of a hard tummy on examination was unremarkable. In the end, apart from slow movement all other conditions were excluded. He disagreed with JC's statement that FC's condition was "chronic and lifelong requiring day and night care".

When approached by the diabetic team voicing their concerns, he had said FC was a "very, very anxious girl" and remained "one of the most problematic girls with constipation to manage." He said he made a comment along the lines of "always wonder if you are being told the whole truth by the mother." With the benefit of hindsight it was possible FC was not being given all the medication but he knew, objectively, when she was not taking the medication she was constipated. He agreed the natural history of FC's condition was for it to improve over time. I found Dr Gillet to be an impressive witness on whose evidence I could rely.

- **Dr Aniela Tybulewicz** – now a consultant paediatrician at **[REDACTED]**, she treated FC after referral from Dr Gillet in July 2011. She continued the treatment he had initiated, including medication at quantities she described "moderate". She had no concerns with the amount, range or volume of mediation prescribed. The medication in question had a good long term safety profile so was unlikely to cause harm, said Dr Tybulewicz.

She explained the amount of medication reduced as FC's condition gradually improved and started taking more responsibility for her own treatment. That was not unusual and to be expected. Although examined a number of times Dr Tybulewicz said on no occasion was FC found to have a hard stomach but there was nothing to be taken from that. There was objective evidence FC was constipated (confirmed by the slow transit marker study), a

position she maintained despite detailed cross examination. However she did agree that a statement made by JC that FC's condition was "chronic lifelong requiring day and night care" was wrong and that FC had never had gastric reflux, despite JC's claim she did.

I was satisfied Dr Tybulewicz was credible and could be relied upon. She was a careful, thoughtful witness who, though crossed with care, stuck steadfastly to her position that FC was not overmedicated.

- **RM** – is JC's partner. They have been in a relationship for a number of years and their relationship subsisted at the time Mr C and Ms Poley were together.

As an aside, it is worth observing there had been no hint of that in any of the preceding, lengthy evidence. There had been an air of a personal agenda in Mr C's cross examination on matters entirely irrelevant to the issues for proof. There was an attempt to question him about his relationship with Ms Poley in a way that was highly pejorative and critical, suggesting he had abandoned JC and the children and that she was, in effect, the victim of his philandering. While that line was not allowed, it came as a surprise to hear in fact both sets of parents were in other relationships and gave a glimpse into the antipathy and hostility JC and, to some extent at least, the children had toward Mr C.

Returning to his evidence, RM spoke of JC constantly reminding CC to check her levels and, on occasion, seeing her input information into CC's pump. He claimed he had never seen CC in a hypoglycaemic state and couldn't recall being aware she was hypoglycaemic on 14 April 2013 although they were all at a wedding the previous day and had stayed at his house. There was, he said, nothing about CC's health that day that gave him cause for alarm. JM said JC would go to CC's bedroom at night – to check her levels he thought – but did not know if she gave any injections at night or fed her.

His evidence suggested he was a little detached from the day-to-day issues with CC and FC and showed a lack of curiosity about the allegations JC had deliberately overdosed CC. However, given the other evidence in this case, nothing turned on his and while curiously light on detail it did not add anything useful to the evidence otherwise available to me.

- **CC** – by the time she gave evidence CC was in sixth year at [**REDACTED**] and awaiting her exam results. She loved [**REDACTED**] and hoped to be able to go to [**REDACTED**] once she had completed a course at [**REDACTED**]. School was something she now enjoyed, said CC, but that was not always the case having been bullied at earlier stages.

CC spoke of the time she was first diagnosed as diabetic, explaining she and her mother had received training in diabetes management and agreed it was thorough.

CC gave detailed evidence about her understating of diabetes control and management as well as the effects and causes of hypoglycaemia. A hypo made her feel shaky, sweaty, hungry and faint, with memory loss and low concentration. She and her mother, together, would calculate the amount of insulin required. While generally she administered Novorapid injections she shared Levemir injections with JC. At night, when she was in bed, JC would check her blood glucose levels and agreed it would be easy enough to inject her if she was asleep or having a hypo. Although at times her mother would wake her in the night there would be other times she would be told in the morning she had been given her food in the night but would have no memory of that.

In early 2013 she was having very frequent hypos with no pattern but most happening at night at home; she had none at school. She denied ever taking insulin she did not require, and was aware that would induce a hypo. She had little memory of the events of 14 April 2013. Her blood sugars had been low and she had been lying on the sofa for most of the

evening drifting in and out. She was not alert, was very tired and sleepy; her mother phoned the hospital. She could remember JC giving her the evening injection of Levemir but could not remember any other injections.

CC said she very tired on the way into hospital but couldn't remember anything else about that journey. She had no memory of stopping for petrol on the way. She did not know where the insulin pens were and did not know who administered the overdose injections.

CC was asked about the unflattering remarks made in JC's evidence and outwith her (CC's) presence. She did not agree she had been stealing and lying, and although frustrated with being diabetic wasn't disruptive or sneaky. She didn't have the energy to be aggressive when she was having hypos. She had never deliberately manipulated the pump or inputted incorrect information, she said, and could not recall ever setting the temporary basal rate to give herself more insulin than she required.

CC was a composed, articulate young woman who impressed as honest, credible and reliable.

- **CH** – JC's father. He spoke to hearing FC in the toilet, crying, because of her bowel condition, of CC administering her own injections and using the pump. He described CC as behaving rebelliously, sometimes viciously. She was sneaky, disruptive, stealing and lying and, sometimes, aggressive, he said. In his affidavit he mentioned an occasion CC "threw a loaded syringe" at her mother. That was curious evidence and hadn't arisen in any of the evidence led to that point, including that of JC who had by then been extensively examined. It hadn't been raised in CC's evidence in chief and it was only at the very end of her cross on behalf of JC (on the same day but after CH had given his evidence) was she asked about it. CC said she had thrown a pen to the floor in frustration but that was all.

CH's evidence was also curious because in his affidavit he used the word "syringe", but when pressed in cross he conceded it was an insulin pen. Nevertheless he was adamant it was at a time when CC was using the pump, in which case she would not have been using insulin pens at all. Describing it as a "loaded syringe" which he said was "thrown at" her mother paints a quite different picture from the throwing of an insulin pen to the floor. Moreover it makes no sense for there to have been a "loaded" (to use his word) pen in use at the time.

CH was asked if his evidence had been discussed with JC (given the way it had arisen) and although he was indignant, insisting it had not, that seemed an appropriate criticism. It is difficult to resist the conclusion that CH's evidence on this matter was exaggerated and designed to show CC in an unfavourable light, just as JC's evidence was when outwith her daughter's hearing.

Another aspect of CH's evidence suggested he was a less than reliable witness. He spoke of CC and her mother "skipping" out to the car after he'd arrived late in the evening of 14 April 2013. That was in stark contrast to both CC and JC's evidence. Neither suggested they were carefree and happy at the prospect of going to hospital late at night; quite the reverse. His description impressed as trying to play down the significance of that evening, because, no doubt, it was significant. His characterisation of the presentation of his daughter and granddaughter was discordant. I did not accept it. I did not find CH to be credible or reliable and did not rely on his evidence in matters of conflict.

- **FC** – spoke warmly of her relationship with her mother; rather less so of her father who she said didn't really listen to her and sometimes didn't seem particularly interested in her. FC described having a good relationship with both of her sisters and told me about her friendship group and interests.

FC went on to describe the symptoms of her constipation saying she felt unwell up to about the age of 10. She suffered from sore stomachs and spoke about the treatments she had received. They didn't seem to be resolving the issue and described going to doctors for examination. FC didn't like the operation (as she called it) when a camera was going to be put down her throat, and it had to be rescheduled for a time she could be given a general anaesthetic. It was unpleasant.

In her evidence FC spoke about the medication working sometimes and not others but said that, over time, things gradually improved and she was able to cut down.

FC gave some evidence about CC, her diabetes, about her admission to hospital and being taken into care. She liked living with her mum she said and wanted that to continue.

Quite properly in the circumstances, FC's cross examination was minimal, eliciting evidence confirming that she needed, and took, medication for constipation; she said found these proceedings upsetting. She said she was upset about her father's affidavit and she did not want to see him again because of what he had said about her mum, blaming her for CC's overdose.

**Submissions**

[24] Lengthy written submissions were produced by all parties. These are not reproduced given that parties were in agreement about the legal framework and that, ultimately, determination of the grounds turned on my assessment of issues of credibility and reliability. If I found the facts supported the grounds, I could find them established. If I did not, I should dismiss the applications and discharge the referrals.

[25] It was also a matter of agreement the civil test applied and that facts were to be established on the balance of probabilities. I accepted the proposition made in submissions

that the more inherently unlikely a fact might be, the more compelling the evidence required to meet that standard.

**Analysis and decision**

[26] The issue of improbability was at its most stark in disputed fact 3 – the overdose. Effectively the question posed was – was I satisfied, on the balance of probabilities, JC had wilfully ill-treated her daughter, CC, by deliberately administering an overdose of insulin in a volume likely to have caused unconsciousness, and would have been fatal had there not been prolonged medical intervention?

[27] It was agreed CC had received a non-accidental overdose at a volume that had the potential to cause serious harm, was life threatening and could have been life ending. Various points could be taken from the joint diabetology statement. The agreed timing of the overdose injection excluded the possibility of anyone other than JC and CC being involved.

[28] Whatever her presentation on arrival at hospital, CC was medically hypoglycaemic and her levels remained excessively low for several hours thereafter, a matter unique in Dr Brotherton's experience. The exact timing of the injections could not be established but having regard to the joint statement, if the Novorapid had not reached its peak (which takes 40 – 50 minutes) by the time she was admitted it would not be fully perfused and absorbed and not yet having its full effect. The evidence was the journey took about 40 minutes.

[29] Taken together with the evidence from Drs Bath and Brotherton about blunted response, it is a reasonable inference that the overdose injection must have been given either just prior to leaving the house or on the way to hospital. In either case only JC or CC were present when it must have been given.

[30] CC was hypoglycaemic in the several hours leading up to the admission. JC contacted the hospital for advice and sufficiently understood the bio-mechanics of insulin to ask if she should administer the evening injection of Levemir. When told to, JC said she did that "against her better judgment." However Levemir does not cause hypoglycaemia and was not the insulin used to overdose CC. The point, however, was JC knew she needed to approach any injections of insulin with care.

[31] There was absolutely no therapeutic requirement for CC to have received **any** dose of Novorapid at the time it must have been given. She was already hypoglycaemic and should have been given carbohydrates, not insulin. JC knew that. She had given evidence that on various occasions at night she had tested CC's blood glucose when she was in bed, found it low and had given her cereal to eat. CC should not have received any dose of Novorapid late in the evening / early morning of 14 / 15 April 2013. That any dose was given indicates a deliberate, non-accidental act.

[32] I considered the terms of the joint statement together with Dr Bath's evidence about how insulin is delivered using pens. The lowest overdose figure was 120 units. An adult pen has a maximum delivery capacity of 60. Dr Bath explained an adult would never need more than 30 units, and that was very much an upper figure – CC's average dose was 8 units. If CC had an adult pen (the evidence was she used the smaller paediatric pens) the overdose injection would have to be given in two entirely separate doses, each dialled up to the maximum possible (and, at that, twice the maximum that would ever be required). Given the volume it would take a little time to deliver each injection.

[33] Clearly if the smaller paediatric pens were used four separate injections at full volume would be required.

[34] The higher the actual volume of the overdose, the more separate injections would be required.

[35] On any view of the evidence that would be an exceptional, deliberate act involving as it would multiple injections of unique volumes of insulin by a person who knew the consequences of injecting insulin into a person whose blood sugars were already so low she was medically hypoglycaemic.

[36] The evidence was CC had spent all evening lying on the sofa drifting in and out of consciousness. Dr Bath and Ms Day said she would lack the physical and mental ability to inject herself in that state. As JC was the only other person with CC at the relevant time it must, on the balance of probabilities, have been her.

[37] The only point they were not together was when JC said they stopped for petrol and she went to pay (it was after midnight, and they were hurrying to hospital). CC had no memory of stopping but, in any event, still would have lacked the capacity to act even if left alone for the time it took to pay for the petrol. Moreover, if that had been when the injections were given CC would have to have found the pens, load and prime them, multiple times, inject herself several times and put the paraphernalia away all before JC returned to the car.

[38] I found that inherently improbable. Instead the suggestion that there was a stop had the air of creating an opportunity for CC to be, briefly, unsupervised, thereby providing the opportunity for her to do something that was, simply, inexplicable. However without a stop for petrol JC would have been with CC throughout and that would only increase the likelihood it was she, JC, who was responsible. It was hard to avoid the conclusion this was a piece of evidence from JC designed to blame her daughter rather than herself. That was a consistent theme of JC's evidence but which I found unconvincing.

[39] There was evidence that, on the whole, CC self-administered her injections of Novorapid. There was also evidence there had been a Novorapid injection given earlier in the evening of 14 April 2013 when the family were eating a Chinese meal.

[40] In her evidence JC was adamant CC had given that injection herself. She described in detail a clear memory of CC standing in front of her giving herself the injection.

[41] That evidence did not sit happily alongside other evidence. In an affidavit prepared for the previous proof JC said she had given that injection to CC. That contradiction was put to her but she could not explain it.

[42] Nor did it sit comfortably with other parts of JC's evidence when she claimed not to be able to remember what were important and significant matters yet said this particular fact was sufficiently memorable she could recall it in that level of detail five years later.

[43] That was curious. Given Novorapid's half-life it could not have been the teatime injection that resulted in the overdose so who gave it was irrelevant. That JC clung steadfastly to the evidence about observing CC giving herself that injection thus contradicting her earlier position did nothing for her credibility.

[44] CC's evidence on the critical point was she didn't know who gave her the overdose injection because her memory of that night was so impaired. That was unsurprising given, objectively, she was in a prolonged hypoglycaemic state that had lasted from at least the early evening until well into the late afternoon of the following day – a uniquely long period according to Dr Brotherton. CC said she did not believe it was her mother but she could not say, as a fact, who had injected her.

[45] I found CC to be an impressive young woman who has had to deal with a number of significant events over her young life, including the accusation her mother deliberately gave her an overdose of insulin that had the potential to cause her serious harm or even death. In

contrast to her mother, CC impressed as a good and reliable historian and, in areas of conflict between their evidence, I preferred the account given by CC.

[46] I was not impressed with JC. She frequently sought to avoid answering perfectly straightforward questions, was evasive and contradictory in her responses. I did not form the impression she was doing her best to give her evidence honestly and in full but was instead obfuscating. A number of passages of evidence were inconsistent with other accounts I found credible and reliable. When challenged about those inconsistencies she was unable to give credible explanations.

[47] By way of example, a great deal of time was taken in evidence to examine the issue of whether the insulin pens used the night before had been taken into hospital on admission. JC's evidence was all over the place and she frequently contradicted evidence she had only just given. It was very difficult to form a clear picture of what she said happened to the pens and she appeared to be developing her evidence "on the hoof". That was damaging to her credibility.

[48] There were several other passages of evidence that had similar problems including the contradictions between her earlier affidavit and the one presented to the court. All of that caused me to form the impression JC was not a truthful witness.

[49] Except where there is other credible and reliable evidence against which I could verify JC's evidence it is rejected in matters of conflict.

[50] Drawing this together I was satisfied, on the balance of probabilities, it was JC who deliberately administered multiple injections of Novorapid to CC in doses that endangered CC's life. I found fact 3 established.

[51] I was not asked to find why JC would do so but, having regard to other evidence in the case, it was not a single anomaly; there was other evidence of harm i.e. fact 2.

[52] Fact 2 concerned the months leading up to the overdose. The allegation was during that period JC had deliberately repeatedly administered CC with amounts of insulin in excess of the level needed to treat her diabetes, and put her health at risk.

[53] I heard powerful and persuasive evidence about this matter from Ms Day and Dr Bath.

[54] The data downloaded from the insulin pump demonstrated a number of times when it was manipulated to cause extended hypos lasting for several hours and then adjusted to very low levels to bring that to an end. The pattern was this happened at night, could not be accidental but at a time when CC's blood sugar levels were already low. It was unlikely CC would be able to complete the full sequence of button presses, and certainly not the different sequences required to reduce the dose and restore normal levels. By the time they happened CC had already been hypoglycaemic for several hours.

[55] The evidence was the pump was being manipulated in several different ways but all of which led to CC receiving doses of insulin in circumstances where it was not required, thus provoking hypos. There was no contrary analysis of the data and Ms Day was not challenged on the substance of her evidence.

[56] In any event, Ms Day's evidence was consistent with and corroborated that of Dr Bath who spoke of a number of concerns about JC's reports of hypoglycaemia. When cross-referenced with Ms Day's analysis those coincided with dates where manipulation was identified.

[57] JC denied acting in the various ways suggested by Ms Day and said the pump was wholly CC's responsibility. She had, she said, only had a very basic knowledge of its workings. What she did not know was that data stored on the hard drive could not be

deleted, even if it was turned off, or batteries removed (and they were). That came as a surprise to her.

[58] I heard about the concerns Dr Bath and her team had about CC's treatment and management. They suspected something was badly wrong and were troubled about JC's reports of multiple different issues. Up to a point JC attempted to give explanations for individual events, frequently unconvincingly, but the number and variety of the different issues painted a picture of exaggeration, manipulation and interference in CC's diabetes management in the way described in fact 2. These issues did not occur when CC was in hospital but only when she was in JC's care.

[59] The common thread through the evidence about the period leading up to the admission in April 2013 was JC reporting escalating problems. I was satisfied it had been proved, on the balance of probabilities, that between 1 January 2013 and 14 April 2013 JC had deliberately repeatedly administered CC with amounts of insulin in excess of the level needed to treat her diabetes, and put her health at risk (fact 2).

[60] The position in relation to fact 5 was rather more nuanced. I was asked to consider if between 1 February 2006 and 24 May 2013 JC had deliberately exaggerated and falsely reported the degree of constipation suffered by FC to such an extent she was overmedicated and had undergone unnecessary procedures.

[61] Given the evidence in relation to facts 2 and 3 it is unsurprising a referral should have been made on fact 5 as well. The Reporter had Professor Milla's report that FC's condition was exaggerated and expressed an opinion why JC should do so, one related to FII, an area in which he has expertise. However that was not an issue for me and that placed a degree of constraint on Professor Milla's evidence which was confined to his paediatric gastroenterology expertise, in which he was eminently well qualified.

[62] What he was not, however, was a doctor who had treated or examined FC; Drs Gillet, Tybulewicz and Boyle were.

[63] The proposition underpinning fact 5 was FC was not as unwell as JC claimed. It was a matter of agreement FC had a condition that resulted in constipation and would have required some laxative type medication to manage it for at least some of the time covered by fact 5. The Reporter pointed to the condition largely resolving once FC was old enough to take responsibility for her own treatment, suggesting I could infer her condition was not nearly as severe as reported by JC.

[64] However, all of the doctors who treated FC rejected the suggestion she was overmedicated and subjected to unnecessary tests and procedures. They found her difficult to treat and certainly there were anomalies they were unable to explain but in contrast to the evidence about CC none of the treating doctors were prepared to give evidence necessary to support the allegations in fact 5. I did not find it established.

[65] That was not the end of the matter for FC however because Facts 2 and 3 were relied on in FC and LC's referrals as well. As I found them established in CC's referral I found them established in theirs too.

[66] I was therefore satisfied CC had been the victim of a schedule 1 offence and that both FC and LC had or were likely to have a close connection with someone who has committed a schedule 1 offence i.e. their mother, JC.

[67] I therefore determined facts 2 and 3 in the grounds for all three children had been established in terms of section 108 (2) & (4), and directed the Principal Reporter to arrange a Children's Hearing to decide whether to make a compulsory supervision order in relation to the children.

[68] As a postscript, I add that JC and all three children appealed by way of Stated Case to the Sheriff Appeal Court. The appeal was abandoned on the day of the hearing.