

TRANSCRIPT OF “FILE ON 4” – “LUCY LETBY: THE KILLER QUESTIONS”

CURRENT AFFAIRS GROUP

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“FILE ON 4”

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MUSIC

EXTRACT FROM BBC NEWS AT ONE ARCHIVE

NEWSREADER: A nurse who worked at a hospital in Chester has been found guilty of murdering babies in her care.

EXTRACT FROM BBC NORTH WEST TONIGHT ARCHIVE

NEWSREADER: Lucy Letby, a nurse responsible for looking after the sickest of newborns. Instead, she set about killing them.

HEGARTY: After two trials, Lucy Letby was convicted of murdering seven babies and attempting to murder seven others.

EXTRACT FROM BBC NEWS ARCHIVE

NEWSREADER: Letby, who had denied all the charges, is the most prolific child killer in the UK in modern times.

HEGARTY: She was found to have deliberately injected babies with air, force fed milk to others, and poisoned two of the infants with insulin.

EXTRACT FROM BBC NEWS ARCHIVE

JUDGE: You acted in a way that was completely contrary to the normal human instincts of nurturing and caring for babies.

HEGARTY: But since her trial, a growing number of experts have voiced concerns.

SHANNON: There is a degree of certainty presented in the case that is in no way justified by the level of uncertainty that we know about in neonatal physiology.

HEGARTY: Raising questions about how the courts grapple with cases of such medical complexity.

YOUNG: The jury were presented with thousands of pages of medical evidence in respect of each child. Tens and thousands of pages of really complicated, difficult evidence.

HEGARTY: These questions aren't from the corners of the internet - they are from specialists in the fields of medicine, statistics and science. In this programme, File on 4 examines some of the most contentious medical evidence in the case, and interrogates the use of expert witnesses in the Lucy Letby trial.

MORLEY: I'm devastated for the families. There's absolutely nothing worse than losing your precious baby, and they've been told that the baby was murdered by Lucy Letby, which is awful. But, you know, my job is to tell the truth about what I think has happened.

ACTUALITY OF NURSES WALKING TO PARLIAMENT

MAN: Have you got your ID?

JULIE: We're here to deliver a letter to our Prime Minister, Keir Starmer, as former nurses, on behalf of the nurses who can't be here today, because they're afraid of being identified. I'm part of the campaign in support of Lucy, questioning the evidence that's been used in court against her.

HEGARTY: These retired nurses believe Lucy Letby could be innocent; that the woman described as Britain's most prolific child serial killer - after one of the longest trials in British criminal history - could be the victim of a miscarriage of justice.

ACTUALITY OF GATE CLANGING

POLICEMAN: Knock on the door, someone will come out.

JULIE: Right, okay.

POLICEMAN: Then you'll do what they've allowed you to do and ...

VIV: Nurses are now speaking out and they are frightened. They feel they've lost their voice, they feel that they are no longer the patient advocate, they feel that they have no duty of candour - and that is important, that they are able to speak out and raise concerns.

HEGARTY: They're delivering a letter to Downing Street, calling for a review of the case. It's been signed by 280 medical professionals - that's only a fraction of the NHS workforce, but it includes nurses, doctors, consultants and hospital managers. They're not alone.

MUSIC

HEGARTY: At her first trial in 2023, Letby was found guilty of murdering seven babies and trying to kill six others. Back then, a small number of people voiced concerns online about the prosecution's evidence. But when that trial and a subsequent retrial ended and reporting restrictions were lifted, questions about the safety of Letby's convictions multiplied. There was the Conservative MP, Sir David Davis.

EXTRACT FROM ARCHIVE

DAVIS: I started off thinking she was guilty. It was only the fact that I got authoritative calls from people who really know about statistics, about medicine, about science, and I had never had anything like this happen before.

HEGARTY: And Peter Green, a professor of statistics and a former President of the Royal Statistical Society.

EXTRACT FROM ARCHIVE

GREEN: The problem is that humans are very good at seeing patterns when they're not really there.

HEGARTY: This growing number of voices casting doubt on the safety of Letby's convictions has been upsetting for the families of the babies involved. The Thirlwall Inquiry is looking at what could have been done to stop Letby. And at its opening last month, Lady Justice Thirlwall was scathing of those questioning the verdict.

EXTRACT FROM ARCHIVE

THIRLWALL: There has been a huge outpouring of comment from a variety of quarters on the validity of the convictions. So far as I'm aware, it has come entirely from people who were not at the trial. All of this noise has caused enormous additional distress to the parents, who have already suffered far too much.

HEGARTY: Paediatrician Dr Dewi Evans was involved in the case from the start. He worked with the police throughout their investigation and he was the prosecution's key expert witness.

EVANS: I'm very, very disappointed with the reaction and the fallout following the verdict. I'm talking about people who have had no access to the clinical notes, were not present at the trial, have not seen the witness statements, have not heard from the parents. And yet there are people out there who are challenging the verdict, and I think they have been grossly irresponsible. The disregard that the so-called experts have had for these families is, quite frankly, disgraceful.

HEGARTY: Many of the parents of these babies sat through the trial and, like the jury, they heard a case that left them in no doubt that Letby was guilty. There was a lot of evidence against her. It was all circumstantial. No one saw Letby commit a crime and there was no forensic evidence. And that has only fuelled questions around the case.

YOUNG: Circumstantial cases can be extremely strong and convincing. There are a combination of different factors, of different circumstances which, when you put them all together, build a case.

HEGARTY: Gudrun Young KC is a barrister specialising in criminal defence. She wasn't involved in the trial, but she's taken a keen interest in the case.

YOUNG: There's a danger in a circumstantial case of adding lots of different things together, which in and of themselves are actually quite evidentially weak, and falling into the trap, which the jury were warned against in this case, but nonetheless, there is this danger of falling into the trap of thinking, well, lots of bits of weak evidence, you layer them on top of each other and you form a certain conclusion. But in fact, those planks aren't in and of themselves evidentially sound. The way I often put it to a jury in a speech is, well, you might get eight pieces of evidence, but if in and of themselves, each one of them is really weak, eight times zero is zero. It's not eight.

MUSIC

HEGARTY: Four senior judges rejected Letby's appeal following her first trial, and at a retrial in June and July, on a count the first jury couldn't reach a verdict on, she was found guilty of attempting to murder another baby. She was handed a fifteenth whole life order, meaning she'll die in prison. But this did nothing to silence the dissenting voices. In fact, they grew louder. A group of neonatal and statistics experts sent a letter to the Government, asking for the Thirlwall Inquiry to be postponed until concerns had been investigated.

READER IN STUDIO: While we acknowledge the gravity of the convictions against Miss Letby, our focus is on the broader implications for patient safety, healthcare management, and the potential for miscarriages of justice in complex medical cases. We believe that legal systems are particularly vulnerable to errors when dealing with intricate scientific evidence, especially in cases involving statistical anomalies in healthcare settings, and the complex physiology of neonates.

HEGARTY: Twenty-four experts signed this letter. They included Dr Svilena Dimitrova, a specialist neonatal adviser to the Care Quality Commission, Dr Tariq Ali, the former head of paediatric critical care at Oxford University Hospital, and Jane Hutton, a professor of medical statistics at the University of Warwick. Professor Hutton questions the backbone of the prosecution's case. They produced a chart that showed Letby was the only nurse on duty every time something terrible happened.

HUTTON: So, the most important thing that isn't there is all the other deaths. If you want to find out what went wrong, I think you need to consider all deaths, not just a subset of them. And if we don't know what went wrong, we've got a limited chance of putting it right.

HEGARTY: What is it about this case that makes statistics so important?

HUTTON: We're clear there were deaths, we don't actually know whether or not there was murder. There might well have been. There might well not have been. We don't know. And that's why it's essential that you carefully consider the alternative explanations and the probabilities of different causes of death.

HEGARTY: In the years up to 2015, the neonatal unit at the Countess of Chester had between one and three deaths a year. Then, between June 2015 and June 2016, there was a cluster of deaths. Thirteen babies died. We know that some of those deaths were referred to a coroner - among them, six of the seven babies Letby was later found guilty of murdering. The coroner said they died of natural causes. But by early 2016, the consultants running the unit were already suspicious of Letby. Doctors had started to refer to her as Nurse Death. Eventually the police were brought in.

HUTTON: The police will only be involved if they're told, we think there is a murderer. In other words, they have to make an assumption that a crime is present. It's very easy to get confirmation bias if you think this has been caused by x, and so you know whether or not that person was present, it's very easy to see things that aren't otherwise there.

MUSIC

HEGARTY: By the summer of 2016, hospital management had removed Letby from the neonatal ward. They also downgraded the unit so that it could only look after babies who needed a basic level of care. And they hired more consultants. The Chief Executive then asked the Royal College of Paediatric and Child Health to carry out a review of the unit. Its report was very critical. There was 'insufficient senior cover', it said, and a 'reluctance to seek advice'. Consultants only did two ward rounds a week and nurses were overstretched. This information was never heard in court. And there were other problems that the jury never heard about.

ACTUALITY GETTING INTO CAB

HEGARTY: Hiya, we're heading to Chancery Lane, thanks.

ACTUALITY OF DOOR SLAMMING

HEGARTY: Three months ago, I was sent this document, and it sheds more light on just how much the neonatal unit at the Countess of Chester was struggling in 2015 and 2016. It's called the risk register, and it's a standard document, a way for staff report serious safety concerns. We can't link any of the issues here to the harm or deaths of babies, but it does paint a picture of a unit that was facing some really serious challenges. In this entry in March 2015 - that's three months before the first murder - the Head of Nursing reports that the ward is understaffed and under-skilled, and she says the same thing again a year later. There are repeated references to a lack of doctor cover. That entry is coloured in red, so it's high risk. Then there's the problem with the transport team, which takes sick babies to more specialist hospitals. In November 2015 and again the following March, they weren't available when they were needed. And then there is this entry in May 2015. It's about an outbreak of a dangerous, antibiotic-resistant bacteria called pseudomonas on the ward. Pseudomonas was responsible for the death of three babies on a neonatal unit in Belfast in 2012, and this risk is high - it's red. It says the unit tried to eradicate the bacteria from taps, but nine months later it was still there.

ACTUALITY IN OFFICE

HEGARTY: Hi.

MCDONALD: It gets your steps up, doesn't it, really?

HEGARTY: Yeah!

MCDONALD: Hiya. So, right, now, who are we all?

HEGARTY: I'm Stephanie.

MCDONALD: Hello Stephanie, hello, hello, hello.

This is a document clearly written in the hand of the people that were working in that unit saying, I mean, this is a cry for help. No other way of looking at it. It's saying, we need help.

HEGARTY: Barrister Mark McDonald - Lucy Letby's new lawyer. He says he's taking her case to the Criminal Cases Review Commission - the first step to try and get her conviction overturned.

MCDONALD: It doesn't take a genius to work out that if such a specialised crisis unit as this is under-staffed with poorly trained people there, that things are going to go wrong. Babies are going to die when they shouldn't die. This was a unit in crisis before Lucy Letby was even arrested.

HEGARTY: You've just been to visit her in prison.

MCDONALD: Yes.

HEGARTY: In HMP Bronzefield.

MCDONALD: I don't want to go into too much detail. What I can say is that, within only a few minutes of being with her, I realised something which I knew almost from the start and following through this trial, that there's a strong case that she is innocent.

HEGARTY: This was famously one of the longest trials in British history. Over a hundred days of evidence presented. Her appeal was rejected by the Appeals Court. Are you just saying simply they all got it wrong?

MCDONALD: Look, every miscarriage of justice that has ever happened in this country had a trial, a lengthy trial. Take, for example, the Birmingham Six or the Guildford Four. They were convicted on the back of expert evidence. They went to the Court of Appeal - in the case in Birmingham Six, twice, and it was rejected. And then they were overturned and nobody questions their conviction now. The fact is, yes, juries get it wrong. And yes, so do the Court of Appeal. History teaches us that.

HEGARTY: What convinces you you're right, everyone else is wrong?

MCDONALD: Well, it's not me. I had a Teams meeting with 22 other experts in England, UK experts - epidemiologists, neonatologists, anaesthetists, those responsible for insulin testing, engineers, all coming forward saying, we have serious doubts.

MUSIC

HEGARTY: One problem that the prosecution had to grapple with was that they had no eye witnesses - no one ever saw Letby harm a baby. Instead, they brought in expert witnesses to help build their case from medical evidence. But some of that evidence has since been examined by other experts. Most weren't at the trial, but they've raised concerns about the way it was interpreted and then presented to the jury. Some of these details surrounding the deaths of these tiny babies, which were heard at the trial, might be difficult to hear. Each baby that died or was harmed was given a letter of the alphabet, so their families couldn't be identified. We've been looking at the case of Baby C - a boy who was born in June 2015, ten weeks premature, weighing just under two pounds. Letby was found guilty of deliberately injecting air into the child's stomach via his feeding tube. Key to the prosecution's case was that Baby C was stable and that his collapse at almost four days old had been unexpected. But five different neonatologists have told File on 4 there were signs Baby C was in trouble before then.

MORLEY: I'm Colin Morley. I've been a paediatrician for about fifty years and specialised towards the end in the care of sick babies, particularly premature babies. I worked in Addenbrookes Hospital in the University of Cambridge, done quite a lot of research related to breathing problems, and I went to Melbourne for ten years as Professor of Neonatal Medicine

HEGARTY: Professor Morley is a world-renowned expert in neonatology. This is the first time he has spoken about the Letby case. He didn't attend the trial, but he's reviewed the evidence heard in court about the care that Baby C received.

MORLEY: Baby C was an extremely small baby, so this baby really needed intensive care. The baby was not in the right hospital. The baby started vomiting black fluid, bile, probably with digested blood. That's a very serious sign, although

MORLEY cont: they didn't seem to appreciate that, and the x-rays showed dilated bowel with a lot of gas, particularly in the stomach and the upper intestine. I think they failed to recognise that the baby had a bowel obstruction which was causing the problems and that needed urgent surgical opinion and probably surgery to save the baby's life.

HEGARTY: You're saying quite clearly here you believe this baby died of natural causes. How confident are you of that?

MORLEY: I'm very confident because of what I've read. Bile stained vomiting, that means intestinal obstruction until not proved. The x-rays showing distended bowel. That means bowel obstruction. And I don't see any reason to come up with a very strange hypothesis that somebody forced gas into the stomach through the nasogastric tube enough to kill the baby. There was plenty of other things going on that would mean the baby wasn't going to survive if he didn't have the proper treatment.

HEGARTY: Baby C's size and prematurity put him at the limit of what the Countess of Chester could care for. Professor Morley says a consultant should have been examining this child several times a day.

MORLEY: This baby certainly should have had higher level of care. They're tricky and they deteriorate, and you need to be able to keep an eye on things to see what's going on. The consultant didn't see the baby for the first three days. He was seen by nurses and trainee doctors.

HEGARTY: It was in the middle of Lucy Letby's night shift that Baby C collapsed. Doctors tried to resuscitate him, but they couldn't.

MORLEY: This and other cases to do with Lucy Letby I've looked at, I got the feeling that the resuscitation was suboptimal. The people's skills were not up to the job of resuscitating a tiny baby like this, and that's not surprising. I mean, it sounds very critical, but this was a hospital that wasn't really set up for a baby as small and sick as this baby. By the time the baby was intubated, twenty minutes later, it would have deteriorated significantly.

HEGARTY: This medical evidence was reviewed and peer reviewed by a team of medical experts – paediatricians, radiologists and a pathologist - and it was considered in great detail, so it's quite a statement for you to make that they simply got it wrong.

MORLEY: Looking after and diagnosing very premature baby, 800 grams is extraordinarily tiny, they just were out of their depth. And instead of going for the diagnosis which was, you know, just bile stain vomiting, the baby's got intestinal obstruction, don't need much more than that. The x-ray was absolutely classical of a baby who'd got a lower bowel obstruction.

HEGARTY: The pathologist who took the stand for the prosecution said there was no bowel obstruction found in the post-mortem.

MORLEY: Well, clinically, the baby did have a bowel obstruction. I'm devastated for the families. There's absolutely nothing worse than losing your precious baby, and they've been told that the baby was murdered by Lucy Letby, which is awful. But, you know, my job is to tell the truth about what I think has happened. I just don't believe this wild hypothesis based on no evidence whatsoever that somebody inflated the stomach enough to kill the baby.

HEGARTY: Letby's defence team did argue that Baby C could have been suffering from a bowel obstruction which doctors had failed to spot. But this was rejected by the prosecution's expert witnesses, including Dewi Evans.

EVANS: I don't think his collapse was the result of a bowel obstruction. What Baby C did have was an infection, and the blood markers were consistent with infection. His case, from a clinical point of view, was the most difficult, because he was very small. But he was doing satisfactorily, as well as could be expected, and therefore his collapse and failure of resuscitation was unexpected. But the biggest concerns was that the x-ray showed a huge great bubble in the stomach and also far more gas than I would expect.

HEGARTY: This x-ray was one of the key pieces of evidence in this case. In pre-trial reports, Dr Evans and other expert witnesses said it was evidence that air had 'most likely' been pumped deliberately into the baby's stomach via his feeding tube. Pathologist Dr Andreas Marnerides told the court these reports - which referenced the x-ray - helped him form his opinion, that Letby killed the baby using this method. But during the trial it transpired that Lucy Letby wasn't working on the 12th June when the x-ray was taken. She hadn't been on shift since before Baby C was born. In his summing up, the judge made it clear to the jury that this x-ray had been taken the day before Baby C collapsed, though he didn't remind them that Letby hadn't been on shift.

I think it's clear that Letby hadn't met the baby by that stage, had she?

EVANS: I don't know. She was certainly there when he died. And again, I only discovered this last week from the evidence that the mother has given in this inquiry, where the BBC has reported that Letby was flitting in and out and flitting in and out, although she was not looking after the baby at the time. And also she had to be told by the parents to leave when they wanted private time with him after treatment had been withdrawn, which is very peculiar, abnormal behaviour from a nurse, quite frankly. And all of this evidence just adds to my concerns about her involvement with this case.

HEGARTY: The x-ray was by no means the only evidence used to convict Letby on this charge. The prosecution argued a series of text messages Letby sent showed she was desperate to get into the room where Baby C was being treated, even though she wasn't his designated nurse. Another nurse said that later that evening, she found Letby standing over the baby's cot when he collapsed. The court heard that her behaviour after his death was strange, as was the fact that she searched for his parents on Facebook.

MUSIC

HEGARTY: The prosecution called six expert witnesses during the trial. The defence consulted several experts, but didn't call any of them to the stand. This lack of expert witnesses for the defence concerns one of Britain's most senior pathologists.

PATHOLOGIST [VIA ACTOR]: I am a paediatric pathologist, a perinatal pathologist. I have 25 plus years of experience. We deal with 500 deaths a year in my institution, and many neonatal deaths, so I think that I have quite robust expertise.

HEGARTY: She doesn't want to be identified because she says the case is too controversial. She deals with bereaved families and says being associated with this case could have an impact on the sensitive nature of her work. Still, she feels strongly enough to raise her concerns.

PATHOLOGIST [VIA ACTOR]: I'm not saying that she's innocent or she's guilty. What I'm saying is that the way that the pathology was presented, that is not convincing to me as a pathologist.

HEGARTY: She's reviewed the case of Baby O - the first of two triplets that Letby was convicted of murdering in June 2016. Baby O was described in court as a stable and healthy baby, who collapsed unexpectedly. The court heard that again x-rays showed a higher than normal amount of gas in his body. The prosecution said Letby murdered him by injecting air into his stomach and into his veins and by inflicting a severe liver injury.

PATHOLOGIST [VIA ACTOR]: After Baby O died, there was a post-mortem done by a very experienced pathologist, Dr George Kokai. He found Baby O had two haematomas - two spots of internal bleeding - in his liver. These are usually caused by injury or surgery. But there are other ways they can be caused. Dr Kokai said they could have been caused by the umbilical vein catheter, the tube into the baby's vein through the umbilical stump. That could have damaged the wall of the liver. Or, he said, these haematomas could have been caused by a lack of oxygen. This is rare, but it happens - I've seen it a few times in my career. And we know this baby suffered from a lack of oxygen before he died. So either a lack of oxygen or trauma from the umbilical catheter could have caused the internal bleeding. And the expert for the prosecution said this was not possible, but I agree with the original report.

HEGARTY: The prosecution's expert pathologist, Dr Marnerides, disagreed with Dr Kokai's original report on what caused the liver bleed. He said he's only seen this type of injury in a road traffic collision or in cases of child abuse.

PATHOLOGIST [VIA ACTOR]: Unless a witness saw non-accidental injury occur, then you can't say it. So to say that it is beyond reasonable doubt and that this was not something natural, that this is a non-accidental injury, to put it bluntly, it's naive to say that. It depends on the opinion and experience you have. I have seen it, but the prosecution expert must never have seen it.

HEGARTY: File on 4 contacted Dr Marnerides for a response to this, but he didn't reply.

He had access to a lot more than you have access to in making this determination. Do you not think it's possible that there's something you're missing here?

PATHOLOGIST [VIA ACTOR]: What Dr Kokai says, it is exactly what I have seen as a prenatal pathologist in, in a couple of cases, a couple of cases in more than 25 years' experience.

HEGARTY: A report published in the Journal of Clinical Medicine two years ago, found hundreds of cases of this kind of liver problem, all in newborn babies, all occurring naturally. In almost half, it led to internal bleeding. And the fatality rate was 87%. There was other evidence used to convict Letby of Baby O's murder. She'd objected to the baby being moved to another area of the unit to be more closely monitored. She was accused of falsifying medical notes, and there was a rash, which prosecution experts said was consistent with air being injected into the baby's veins. They also said Letby overfed him with milk. And there was the fact that Baby O's twin - Baby P, who was also one of Letby's patients - died in similar circumstances the next day.

MUSIC

HEGARTY: Two cases were absolutely pivotal in the Letby trial - the attempted murders of Baby F and Baby L. She was convicted unanimously of attempting to murder both babies by adding insulin to their feed bags. Both cases centred around the

HEGARTY cont: result of one test - the immunoassay test. It showed that in the case of these two babies, insulin levels were abnormally high. The prosecution said the results proved they had been poisoned by insulin. But since Letby's conviction, these test results have come under scrutiny.

ISMAIL: First of all, I don't know if Lucy Letby is guilty or not. That's not what I'm talking about. I'm talking about this issue, which I regard as being critical in relation to the laboratory measurements.

HEGARTY: Dr Adel Ismail is a former head of clinical biochemistry and pathology services at an NHS trust, and he's a leading expert on the immunoassay test. He says it can produce misleading results.

ISMAIL: I see immunoassay results which are false high or false low. That technology is more prone to error than the rest of the laboratory tests we use. In my research, I found the error rate is 1 in 200. If I have the slightest suspicion, the slightest, I would do the follow up tests to confirm the integrity and the veracity of the measurements. That confirmatory test is, is absolutely vital.

HEGARTY: So it's your opinion that this test shouldn't have been used in a court without proper verification?

ISMAIL: I actually think that this results, if I am producing them, I wouldn't forward them to the clinician, not in court, to the clinical colleagues without verifying the veracity and integrity.

HEGARTY: So you wouldn't have even sent these results back to the doctors without doing extra verifications?

ISMAIL: That is absolutely correct.

HEGARTY: Follow-up tests weren't carried out. However, there are experts who believe these tests are good enough to rely on a single set of results, and are confident of their use in court. But even if the results used in the Letby trial were correct, and

HEGARTY: The prosecution said only a tiny amount of insulin would have been needed to harm these babies, that no one would have noticed it going missing. Helen Shannon has been working on a mathematical model to examine this, to determine how much exogenous - or synthetic - insulin Letby would have needed to harm these babies.

SHANNON: There are a number of areas of the insulin cases which require mathematics. Now, one of the areas is how much insulin would be required in order to achieve an insulin dosage in the bodies of these tiny neonates. On the hypothesis that the insulin level was accurate and the insulin level was due to exogenous insulin, we thought, well, let's just apply engineering principles and see how our results compare.

HEGARTY: For Baby F, their model suggested that Letby would have needed much more insulin than the prosecution claimed

SHANNON: The range of answers that we get vary from about five times the amount to about twenty times the amount. There is huge variability. But that is more typical than not for these types of calculations.

HEGARTY: For the second baby - Baby L - the prosecution said only 1% of a vial of insulin would have been needed.

SHANNON: The calculations performed by Geoff and myself ranged from 20% to 80% of a vial.

HEGARTY: That's quite different to 1%. So twenty times or eighty times the amount that the prosecution's expert witness said in court was needed.

SHANNON: Compared with 1%, yes, indeed. Yes.

HEGARTY: If the model is correct, Lucy Letby would have had to inject much more insulin into the babies' feeding bags to generate the high levels seen on the immunoassay test results. But there was no evidence to suggest any insulin had gone missing on the ward. Again, this wasn't the only evidence against Letby. The prosecution said both

