DENISON

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Report to the Court of Appeal Re: Applicant Benjamin David GEEN

I am instructed by Bastion Lloyd Morris Solicitor Advocates of 209 Sovereign Court, Witan Gate East, Central Milton Keynes, MK9 2HP, to prepare a Report concerning the case of R v GEEN.

My knowledge of the case is presently limited to the following documents:

1) A Letter of Instruction, ref SLM/SH/77056-16/Geen; dated 07/05/09.
2) Court of Appeal Office Summary ref 2007/5540/D3 dated 24/10/07
3) An undated and unsigned three-page summary of Mr Bateman's Medical History
4) Numbered pages 5542 to 5703, being photocopies of AB's Medical History
5) Numbered page 6927 being a photocopy of Serious Incident Report 219
6) Numbered page 7230 being a photocopy of SB's Cremation Certificate
7) Numbered pages 663-666 being photocopies of Mr Ricky Bateman's Statement
8) Numbered pages 221-222 being photocopies of Nursing Sister Ann Shea's Statement
9) Numbered pages 670-672 being photocopies of Nursing Sister Ann Shea's Statement
10) Numbered pages 656-662 being photocopies of Mrs Rose Blackwell's Statement
11) Numbered pages 680-683 being photocopies of Dr Sally Chamber's Statement
12) Numbered pages 674-675 being photocopies of Dr Alexandra Jones' Statement
13) Numbered pages 757-760 being photocopies of Dr Alexandra Jones' Statement
14) Numbered pages 345-346 being photocopies of Dr Graham Walker's Statement

15) Numbered pages 678-679 being photocopies of Dr Graham Walker's Statement
16) Numbered pages 813-814 being photocopies of Dr Tony Ellis' Statement
17) Numbered pages 527-570 being photocopies of Professor Alan Aitkenhead's Statement
18) Numbered pages 827-853 being photocopies of Professor Alan Aitkenhead's Statement
19) Numbered pages 877-887 being photocopies of Professor Chris. Milroy's Statement
20) Numbered pages 921-947 being photocopies of Professor Alexander Forrest's Statement
21) Fifteen unnumbered pages being photocopies of Dr F Patel's Statements
22) Seven unnumbered pages being photocopies of Dr Aham Amadi's Statements
23) A three page extract from the Statement of Dr Alistair Lack

My qualifications to comment this case are given in the paragraphs overleaf:

Name:	David Maurice Denison (d.o.b. 07/03/33)
Address:	Flat 34, Fenner House, KT12 5PL (tel: 01932 248 771)
Current Posts:	Emeritus Professor of Clinical Physiology and Consultant – Research Integrity, at the Royal Brompton Hospital and the National Heart and Lung Institute (imperial College), London
	Member, Ministry of Defence Research Ethics Committee
	Scientific Adviser to the Colt Foundation
Previous Posts	Head of Clinical Audit (RBH & NHLI)
	Head, Research Audit (RBH & NHLI)
	Member, Research Ethics Committees of the Royal Navy and the Health and Safety Executive
	Chairman, Research Ethics Committee (RBH & NHLI)

Civil Consultant in Clinical Physiology to the Royal Navy

Civil Consultant in Applied Physiology to the Royal Air Force

Author: About 250 peer-review papers and chapters in major textbooks

Experience: Acted as an expert witness in many cases of murder, manslaughter, corporate manslaughter, grievous bodily harm, suspicious deaths and personal injury

MY REPORT

This report concerns the battery of charges against the Applicant, Benjamin David GEEN.

1. The Criminal Appeal Office Summary states:

> *"On 18th April 2006 in the Crown Court at Oxford (Crane J.) the applicant was convicted of two offences of Murder and fifteen offences of Causing grievous bodily harm with intent. On 10th May 2006 he was sentenced to LIFE IMPRISONMENT with minimum recommendations of 30 years for the two charges of Murder and of 8 years for the fifteen charges of grievous bodily harm.*
>
> *"In early 2004, Horton General Hospital in Banbury investigated the sudden and apparently inexplicable respiratory arrest in patients admitted to the Accident and Emergency Department. In a period of 8 weeks, 18 cases were regarded with suspicion.*
>
> *The applicant was a staff nurse and was the only nurse on duty on every occasion. He was arrested on 9th February 2004. A syringe was found in the pocket of the fleece he was wearing over his work clothes and he had discharged the contents within the pocket. The substance was identified as Vecuronium (a muscle relaxant). Traces of another drug, Midazolam (an anaesthetic), were also identified in the cloth. Both drugs individually or together, could cause impairment of the senses.*
>
> *When questioned, the applicant denied any wrongdoing in relation to patient care. In relation to the syringe he said he must have taken it home by mistake, but panicked when detained and so discharged the content unaware of what it contained."*

2. In essence, the three-paragraph quotation above, and careful reading of the documents listed on Page 1 of this Report, suggests there may be two potential flaws in the general case for conviction.

1) The first potential flaw concerns the rigour needed to identify a train of adverse clinical events within a medical practice or hospital department correctly. It is often more difficult than seems at first sight but commonly encountered during Medical Audit. Medical Audit is the discipline that analyses differences in clinical outcomes between different medical teams or similar hospital departments, in order to identify good practices and improve clinical outcomes for more patients. When a train of adverse medical events is suspected within a Department it is essential to establish whether the basis of the suspicion is numerically sound or not. To do this you need detailed, seasonally-weighted records of case-mix severity within the same Department over the previous few years, and these records should be compared with corresponding records of several similar external Departments with equivalent case-mix severities. This approach was pioneered by the eminent cardiothoracic surgeon Sir Terence English in 1975 and is described in detail, for example, in the Annual Reports of the Society of Cardiothoracic Surgeons of Great Britain and Ireland. Its merit is to improve the probability that, as in any other field of numerical information, you are genuinely comparing like with like and thus entitled to draw valid conclusions. In this regard it is not sufficient to compare the suspect train with performance of the same Department over the same short period the following year, since the suspicions alone could have improved team performance, making the comparison invalid. Most trains of adverse clinical events are due to systemic failures rather than the actions of particular individuals, yet organisations have a self-protecting and self-fulfilling tendency to hunt for witches. Once rumours begin, they multiply even in the absence of valid evidence. In the case of R v GEEN suspicion fell on him because "*he was the only nurse present on every occasion*" yet, by itself this is a very slender basis for indentifying an individual in what is more likely to be a train of systemic failures. Exactly how many other combinations of each other members of the overall team were present on each of the 18 events? What criteria were used to identify the 'events'? Did the criteria change or mature during the course of the

investigations? Were they statistically valid? Was the identification of a particular individual statistically valid? There is little evidence of rigour in the identification of Geen, in the documents listed on Page 1. There was locker-room chatter about the frequency of respiratory arrests transferred to ICU. Hearing it, Dr Graham Walker reported it to the Clinical Risk Team at 0905 hrs on February 6th 2004 saying "I think we may have we may have another Beverly Allet here". Later that day Geen was identified as the 'suspect. He was arrested when he arrived for work on February 9TH 2004.

2) The second potentional flaw: Was the identity of the suspect revealed to the expert witnesses before they began their examination of the raw data? If so, at what stage of their deliberations? Could that revelation have unconsciously affected their conclusions? Did they take his identification as a 'given? It is a basic principle of any scientific investigation, of which the Case of R v GEEN is an example, that investigators should be blinded to which data supports or refutes a hypothesis, until the objective survey of the data is complete because, otherwise, subconscious observer bias slips into the interpretation of even the most scrupulously conducted experiments, making the conclusions statistically invalid? This could have been achieved by asking the expert witnesses to comment freely on a larger number (say further 18 or more, randomly selected case reports of other admissions to ICU over the same time period) before revealing the identity of the hypothetical 'suspect'. This is now more difficult because any fresh expert, seeing the caption R v Geen is likely to look up Geen on the internet where information on the first trial is readily available.

3. For similar reasons, were the findings of the discharged syringe and the specific drug Vecuronium revealed to the expert witnesses and if so, at what stage of their enquiries? Could this revelation have introduced any element of subconscious observer bias? Again, for the same reasons, was the presence of Midazolam in the fleece pocket, revealed to the Prosecution Experts and, if so, at what stage? Could this revelation have introduced subconscious observer bias?

4. I am well aware that positive answers to all of the questions above may well lie in the volumes of Court data that I am yet to see, but they do not seem to exist in the documents listed on Page 1.

(i) I understand that concern was first raised by a Consultant Anaesthetist, Doctor Weston at the beginning of February 2003. A meeting was held where a suspect may have been indentified. Over the weekend, a doctor reviewed the notes of a number of patients and on the Monday, Geen was arrested when he arrived at work. Geen was interviewed the same day and allegations that he had harmed the patients in his care where put to him.

(ii) It is clear that Geen was a suspect from the beginning and remained so throughout the weekend.

(iii)Following his arrest, the prosecution instructed a number of medical experts to give an opinion on why the patients had a respiratory arrest, amongst them where: Professor Aitkenhead, Doctor Patel, Doctor Carey and Doctor Milroy. Each of the witnesses knew that Geen had been arrested, the nature of the case against him which including that a residual of Vecuronium and Midazolam had been found on his clothing and in the syringe found in his pocket.

(iv)I am also well aware of the principle that Expert Witnesses are deployed in courts because of their integrity and ability to distinguish fact from fiction in their fields. I have direct knowledge of, and great respect for the integrity and high achievements of Professor Aitkenhead, Professor Milroy, and Professor Forrest They have clearly examined the bulk evidence with great care. My questions concern procedural issues related to the form and timing of presenting them with the evidence they have considered.

(v) However, it is plain that the central plank to the prosecution case was that there is a pattern, respiratory arrests are rare, Geen had the opportunity to harm the patients and so it follows that he was responsible for the harm. In the judge's summing-up

to the jury, he put the prosecution case on the issue of a pattern, in the following way:

"That is the prosecution case. They also say - and this is another aspect of the same general point made - that respiratory arrest is rare, as compared with cardiac arrest, and they submit that these patients with which you are concerned suffered either a respiratory arrest, in the sense that the breathing actually stopped, or at least a marked deterioration, with a reduced ability to breath for themselves . It may be, ladies and gentlemen, that the evidence suggests in some cases, may it not, that further deterioration was clearly prevented by action on the part of the doctors and the nurses.

Mr. Austin-Smith submitted to you that the patients were chosen because taken individually the defendant thought that no-one would be suspicious about a sudden deterioration in their condition. The defence, in the person of Mr. Hussain, submit no pattern emerges - or at least no pattern that could provide a basis for drawing any conclusions. He points out that you should note that there were different ages of people, men and women, different illnesses, different alleged drugs. If there was a pattern, despite those differences, which way does that consideration point?

So ladies and gentlemen as I directed you yesterday, the overall picture and the question of whether there is an abnormal pattern of events, can form an important part of your discussion, and I have directed you about the way that should be approached.

What about opportunity? There is no direct evidence from any eyewitness, who says, well, I saw the defendant administering a drug, once a patient had a Venflon in, or more than one, it would be very easy to use a syringe to insert a drug into them . They suggest that the defendant, if seen administering something to a patient, would not arouse suspicion, because anyone would assume he was simply someone getting on with his job."

5. In deciding whether there was a pattern, the jury was primarily asked to consider three pieces of evidence:

   i. A comparison between the period when Geen worked in A&E (2003-2004) and the following year (2004-2005).

   "Let us look at the overall picture for a moment. Is there an abnormal pattern? Head Nurse at A&E Michelle Blogg, the successor to Elaine Randall as I have made what counsel would probably call 'a pen picture' of some of these witnesses - because it is quite difficult to remember them, and I will give you my brief description of them, it may help call them to mind. The trouble is, quite a lot of them looked the same so it is not always easy. I have 'black jacket, fair hair, white blouse, and out of breath when she first went into the witness box.' After the period with which we are concerned, a Resus register was introduced - and may we just look at that for a moment, in the blue folder at divider No.18. We need not go through it all, but you will remember this is a summary of patients who ended up in Resus in the equivalent period, from December into February, in 2004/2005 - in other words the identical period to the period with which you are concerned. There were 53 patients who ended up in Resus and she told us that 50 were pre-warned - in other words, the ambulance arrived with its blue light flashing and they go straight into Resus . Only three went into Resus after their initial admission. We do not have, because no such records were kept, any such overall figures for the period with which you are concerned, but there is no dispute that the 18 patients with whom you are concerned went into Resus after their admission, having initially gone either to the major or the minor side."
   (taken from Judge's Summing-up)

   ii. Anecdotal evidence from the main prosecution evidence Professor Aikenhead:

"The evidence of Professor Aitkenhead was that primary respiratory arrest in other words the breathing stopping first - is very unusual except in the operating theatre, and he was asked specifically about the Accident, Emergency at Nottingham, which is one of the biggest in the country, where it is rare. He said, 'Although no records are kept which I can quote, because an anaesthetist is always called' - (he is in charge of the anaesthetist department) - he is well aware of how many such events occur. You have in the blue file - I do not ask you to turn it up at the moment - a schedule of the occasions when the defendant is said to have been on duty. In fact, that schedule is not admitted, and strictly is not in evidence, but there is no issue about it."

iii. Anecdotal evidence from Stuart Harper, a Charge Nurse from Hartlepool A&E.

"You heard evidence from elsewhere as well: Stuart Harper, the gentleman in a tight brown suite, black spiky hair and glasses, who came down from Hartlepool. A nurse, qualified for seven years, two as a Charge Nurse , his experience was that in A&E respiratory arrest in general is not very common; it tends to be cardiac arrests that happen, and he has never had an unexplained respiratory arrest . In fact in the period with which we are concerned, December 2003 to February 2004, there was no respiratory arrest in his department - he has checked - except for three which were explained; there was a clear cause and the patient in fact sadly died in those cases."

6. For the reasons stated above opinion evidence about normal/unusual patterns of patients going through a department without proper evidence that this variation was not simply due to chance should not, in my opinion, have been put before the jury. This is clearly a statistical issue, and requires statistical expertise to address it. Absent a proper statistical basis, opinion evidence is valueless and misleading.

7. The principle of blinding investigators to hypotheses to avoid subconscious observer bias is a fundamental rule of good science. It does not appear to have been followed in the Case of R v Geen.

Declaration

1. I have set out the substance of all the instructions I have received (with written and oral questions) upon which my opinion has been sought and the materials provided and considered, and the documents, statements, evidence, information or assumptions which are material to the opinions expressed or upon which those opinions are based.

2. I have stated the facts and assumptions upon which my opinion is based.

3. I have identified, where relevant, the questions and issues lying outside my expertise.

4. Insofar as there is a range of professional opinion I have set that out together with the reasons for forming the opinion I have expressed.

5. I have set out my academic and professional qualifications relevant to the opinion I have expressed herein and the range and extent of my expertise, identifying where relevant any limitation in that expertise.

6. I believe I have complied with my duty to the Court to provide independent assistance by way of objective unbiased opinion in relation to matters which are

within my expertise and I will inform the Prosecution, the Defence and the Court in the event that my opinion subsequently changes on any material issue.

Professor David Denison
30th June 2009