BARBADOS

[Unreported]

IN THE SUPREME COURT OF JUDICATURE

COURT OF APPEAL

Civil Appeal No. 20 of 2008

BETWEEN

DR. JAMES BOYCE **Appellant**

AND

CORINE LORDE **Respondents**

STEPHEN LORDE

Before: The Honourable Justice Frederick L.A. Waterman, CHB, The Honourable Sherman R. Moore and the Honourable Sandra P. Mason, Justices of Appeal.

2009: November 11, 12 and 13

2010: January 6 and 7

2011: August 16

Mr. Roger C. Forde, Q.C. in association with Mr. Francis De Peiza and Mr. Brian Barrow for the Appellant.

Mr. Elliott D. Mottley, Q.C. in association with Ms. Marilyn Moore and Ms. Andrea Simon for the Respondents

JUDGMENT

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MASON JA:

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Introduction

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[1] This appeal is from the decision of **Reifer J** in which she entered judgment for the respondents in a case involving medical negligence.

Facts

[2] The respondents, Stephen and Corine Lorde, are husband and wife. Mrs. Lorde who was pregnant with twins was a patient of the appellant, a consultant obstetrician/gynaecologist. Her estimated date of delivery was 25 January 1999 but on 3 January, her membranes ruptured prematurely as a result of which she was admitted to the Bayview Hospital where she underwent an emergency caesarian section performed by the appellant. Mrs. Lorde was delivered of healthy twin girls.

[3] Mrs. Lorde remained in the hospital for five days during which time her temperature fluctuated. On 4 January, Mrs. Lorde was reported to have a temperature of 37.5ºc and had now become tachycardic (rapid pulse) with a pulse rate of 100 per minute. On 5 January, her temperature remained elevated with a mild tachycardia. She was medicated with an oral antibiotic. On 6 January, she complained of feeling tired and dizzy and her pulse rate was still slightly elevated and her temperature again rose after having reduced a little earlier on that day. On 7 January, her temperature became even more elevated and she complained of feeling unwell. On 8 January, a high temperature and elevated pulse were again recorded. Later in that day, Mrs. Lorde suffered a panic attack and complained of feeling unwell. She was "seen" by the appellant and in spite of her misgivings she was discharged. A review of the graphic sheet during the period of hospitalization shows that Mrs. Lorde was febrile from the time of admission with spiking temperatures and her temperature never reverted to normal up to the time of her discharge.

[4] The next day, 9 January, after complaining of feeling unwell, she was visited at her home by the appellant who examined her and readmitted her to the Bayview Hospital. The appellant's diagnosis was postoperative pyrexia secondary to infection.

[5] On readmission Mrs. Lorde was treated intravenously with antibiotics for 3 days. On 10 January her temperature remained elevated. On that day blood cultures, a complete blood count and sputum were taken. On 11 and 12 January, Mrs. Lorde's temperature and pulse rate remained elevated and she complained of pain. On 13 January her temperature was recorded as normal and she was discharged.

[6] Following that discharge and until 21 January, Mrs. Lorde's health deteriorated to the point where she fell unconscious and suffered a stroke. She had again to be hospitalized, this time in the Medical Intensive Care Unit at the Queen Elizabeth Hospital. It is the evidence of Mr. and Mrs. Lorde that during the period following the second discharge, that is, 13 to 21 January, a number of telephone calls were made to the appellant but they were never able to personally contact him.

Plaintiffs/Respondents'Pleadings

[7] By a Writ of Summons and Statement of Claim dated 5 February 2001, Mr and Mrs. Lorde claimed damages against the appellant and the Bayview Hospital on the grounds that they negligently managed Mrs. Lorde's case. This Writ of Summons and Statement of Claim were amended on 19 January 2005 and re-amended by order of the court on 27 September 2005.

[8] The Lordes' allegations of negligence are more particularly set out at paragraph [16] of **Reifer J's** judgment.

Defendant/Appellant's Pleadings

[9] In his defence the defendant denied those allegations of negligence and maintained that he used all reasonable skill, care and diligence in attending to, treating and advising Mrs. Lorde during the period of pregnancy, delivery and after surgery.

Judge's Decision

[10] The court was satisfied on a balance of probabilities that Mrs. Lorde contracted an infection as a result of poor management by the appellant after the caesarian section and that there was a general failure to properly manage the situation to determine and treat the source or cause of the infection (para. [52] of the judgment). The court was of the opinion that on the evidence of the experts the pelvic infection ultimately caused the stroke.

[11] The court was also of the view that from inception the failure to administer prophylactic antibiotic during or immediately after the surgery in a patient who was at higher risk as a result of the rupture of her membranes was an error of clinical judgment. **Reifer J** determined that Mrs. Lorde's after-care was below an acceptable standard since:

(a) there was a failure to administer the antibiotics during surgery;

(b) oral as opposed to intravenous antibiotics were prescribed after the surgery;

(c) there was a failure to ensure the antibiotics were administered in a timely fashion;

(d) there was a poor (though not ridiculous) choice of antibiotics; and

(e) Mrs. Lorde had been discharged without proper follow- up care.

[12] As a consequence the court determined that the particulars of negligence as alleged had been proven and that the appellant was liable.

[13] The claim against the Bayview Hospital was dismissed, the court having found that the Lordes had failed to establish a case against the hospital.

Grounds of Appeal

[14] The appellant appealed these findings and filed the following grounds of appeal:

i. The Learned Trial Judge misdirected herself and/or erred in law and/or finding of fact in finding that the injury (stroke) suffered by Mrs. Corrine Lorde the Plaintiff/Respondent was caused by the negligence of the First Defendant/Appellant in that:

a. the Learned Trial Judge paid no or no sufficient regard to the undisputed evidence of Medical Consultants, Messrs. Gill and Marquez that there was no evidence of infection in the body of Mrs. Corrine Lorde, the Plaintiff/Respondent at the time that she was admitted to the Queen Elizabeth Hospital on 21 January 1999;

b. the Learned Trial Judge paid no or no sufficient regard to the evidence that the age of Mrs. Corrine Lorde, the Plaintiff/Respondent (43 years) and her origin (African Descent) increased the risks of cerebro-vascular injury during the puperium as a natural and ordinary but unfortunate complication of the event of childbirth;

c. the Learned Trial Judge paid no or no sufficient regard to the evidence of Mr. Sean Marquez that the cause of the injury (stroke) suffered by Mrs. Corrine Lorde, the Plaintiff/Respondent was unknown.

ii. The decision is against the weight of the evidence in that the evidence does not establish that the injury (stroke) suffered by Mrs. Corrine Lorde, the Plaintiff/Respondent, was caused by:

a. infection and/or

b. the negligent treatment of the First Defendant/Appellant.

Discussion

[15] In his introduction, Mr. Roger Forde, Q.C., counsel for the appellant, submitted that in terms of the jurisdiction of the Court of Appeal, **Order 59, Rule 5** of the **Rules of the Supreme Court, 1982** provides that an appeal shall be by way of re-hearing. He submitted that since ground (ii) of the appeal – causation – concerned the finding of fact, the following statement from the 1991 edition of the "White Book" (**The Supreme Court Practice, UK), note 59/1/30** offered good guidance to the Court of Appeal:

> "Even where the appeal turns on a question of fact the Court has to bear in mind that it has a duty to rehear the case and the Court must reconsider the material before the Judge with such other material as it may have decided to admit. The Court must then make up its own mind not disregarding the Judgment appealed from, but carefully weighing and considering it, and not shrinking from overruling it if on full consideration it comes to the conclusion that it is wrong. Great weight is due to the decision of the Judge at first instance whenever in a conflict of testimony the demeanour and manner of witnesses who have been seen and heard by him are material elements in consideration of the truthfulness of these statements, but the parties to the cause are nevertheless entitled as well on question of fact and question of law to demand the decision of the

Court of Appeal and the Court cannot excuse itself from the task of weighing conflicting evidence drawing its own conclusion though it should always bear in mind that it has neither seen nor heard the witnesses and shall make due allowance in this respect."

[16] Mr. Forde submitted that the judge failed to analyse the evidence of the experts in order to determine whether her findings could be supported by the evidence of the experts. He contended further that the judge did not make sufficient reference in her judgment to the evidence which had weighed with her, that she merely pronounced that she was satisfied on a balance of probabilities on the evidence of the experts that the pelvic infection ultimately caused the stroke and that the appellant was liable. In counsel's opinion, the judge did not evaluate the evidence in order to say why she preferred one expert's opinion over that of the other. He maintained that the judge needed to resolve the conflict of evidence of the experts since there were several experts and each expert had his own discipline.

[17] Mr. Forde was of the view that it was now incumbent upon the Court of Appeal to reconsider the matter and reach its own conclusion. He argued that since the credibility of the experts was not in issue, the court would be in as good a position as the trial judge to evaluate the evidence by considering the reports of the expert witnesses.

[18] In support of his contentions, Mr. Forde relied on the cases of ***Cooper v. Floor Cleaning Machines [2004] RTR 17; Sewell v. Electrolux Ltd, [1997] EWCA Civ 2443*** and ***Montgomery v. Wallace James (1904) AC 73.***

[19] Mr. Elliott Mottley, Q.C., counsel for the respondents, countered these submissions by reference to a number of decided cases: ***Watt (or Thomas) v. Watt [1947] AC 484; English v. Emery Reimbold and Strick Ltd [2002] 1 WLR 2409; Alexander-Raymond v. Skelly et al LC 1997 CA (Civil Appeal No. 8 of 1995), Kwasi Bekoe v. Horace Brooms [2005] UKPC 39*** and ***Buvardo v. Forde, Civil Appeal No. 7 of 1998,*** judgment delivered on 28 January, 2003.

[20] Mr. Mottley relied on the oft - quoted statement by **Lord Thankerton** in ***Watt (supra)*** where at page 487 he set out the approach to be taken by an appellate court. This approach has been "stated and reaffirmed time and again throughout Commonwealth jurisprudence" and also within this jurisdiction:

"(i) Where a question of fact has been tried by a judge without a jury, and there is no question of misdirection of himself by the judge, an appellate court which is disposed to come to a different conclusion on the printed evidence, should not do so unless it is satisfied that any advantage enjoyed by the trial judge by reason of having seen and heard the witnesses could not be sufficient to explain or justify the trial judge's conclusion.

(ii) the appellate court may take the view that, without having seen or heard the witness, it is not in a position to come to any satisfactory conclusion on the printed evidence.

(iii) The appellate court, either because of the reasons given by the trial judge are not satisfactory, or because it unmistakably so appears from the evidence, may be satisfied that he has not taken proper advantage of his having seen and heard the witnesses, and the matter will then become at large for the appellate court."

[21] Mr. Mottley also quoted the ***English*** case in which **Lord Phillips MR** advised that:

"26 … the appellate court should first review the judgment, in the context of the material evidence and submissions at the trial, in order to determine whether, when all of these are considered, it is apparent why the judge reached the decision he did. If satisfied that the reason is apparent and that it is a valid basis for the judgment, the appeal will be dismissed."

[22] In addition Mr. Mottley relied on the statement by **Lord Carswell** in the ***Kwasi Bekoe*** case where in giving the judgment of the Privy Council, **Lord Carswell** observed at para 14 that the Court of Appeal of Trinidad and Tobago had decided that while accepting that the judge might well have set out in greater detail his analysis of the evidence, he was nevertheless justified in reaching his factual conclusions in the central issue. **Lord Carswell** continued that "a judge sitting without a jury does not necessarily have to review every fact and argument presented to him. His function is to reach conclusions and give reasons to support his view, not to spell out every matter as if summing up to a jury".

[23] Mr. Mottley submitted that the judge clearly identified the evidence which she considered in order to reach her decision.

[24] It is admitted that while the Court of Appeal has jurisdiction to review the record of the evidence to determine whether the conclusion reached by the trial judge upon that evidence should stand, the court will not arbitrarily depart from the well established rule which states that the Court of Appeal will not overrule the decision of the Court below on a question of fact in which the judge has had the advantage of seeing the witnesses and observing their demeanour unless the appellate court finds some governing fact which in relation to others had created a wrong impression. The legal authorities both within this jurisdiction and within the Commonwealth are myriad in relation to the approach to be taken by the Court of Appeal in these circumstances.

[25] In addition to the decided cases, the Court of Appeal has been given authority by **section 61 (1) (e)** of the **Supreme Court of Judicature Act, Cap 117A** to make its own decision on issues of fact. That **section** provides:

> "… for all the purposes of and incidental to the hearing or determination of any appeal … the Court of Appeal has, in addition to all other powers exercisable by it, all the jurisdiction of the original court and may
>
> e) draw any inference of fact that might have been drawn, or give any judgment or make any order that might have been given or made by the original court, and make such further or other order as the case requires."

[26] Thus, as submitted by counsel for the appellant and accepted by this Court, the Court of Appeal is in as good a position as the trial judge to evaluate the evidence where inferences are to be drawn from specific facts.

[27] At the hearing of the appeal, both counsel indicated that extensive written submissions had been produced for the trial judge. In addition to these submissions, voluminous transcripts of evidence and experts' reports were in turn reproduced for the consideration of this Court with the intention that the Court in reviewing the judgment would be assisted in determining why the judge reached the decision she did.

[28] One question for consideration before the trial judge was whether on a balance of probabilities it had been established that the appellant had failed to exercise the care required of a doctor professing the relevant special skill in circumstances which require the exercise of that special skill.

[29] In our view the judge in determining the appellant's breach of duty to Mrs. Lorde and the standard of care required in the circumstances correctly identified the following matters as being relevant:

(i) The duty of care is determined by the state of medical knowledge and practice at the time of the alleged negligence (paragraph 2 of the judgment).

(ii) A departure from the normal practice will not of itself be necessarily negligent (paragraph 3 of the judgment).

(iii) In order to find negligence it has to be shown on the evidence that there is in fact a standard of practice in relation to the activity under discussion, that the defendant has not adopted this standard approach and that the deviation from the standard is one which no person of ordinary skill would have undertaken if acting with ordinary care (paragraph 3 of judgment).

(iv) The standard of care is that of the reasonably competent practitioner in the relevant post having the relevant qualifications, seniority or specialist practice, **Bolam Test (**paragraph 4 of the judgment).

(v) The defendant needs to show that he followed a course regarded as proper by a reasonable body of medical men or a competent reasonable body of opinion. The court has to be satisfied that the exponents of the body of opinion relied upon can demonstrate that such opinion has a logical basis and in assessing this the judge must ascertain whether the "experts have directed their minds to the question of comparative risks and benefits and reached a defensible conclusion on the matter", **Bolitho (**paragraph 7 of the judgment).

(vi) A doctor should not make unsubstantiated assumptions about a patient's condition, (paragraph 10 of the judgment)."

[30] **Lord Phillips of Worth Matravers *MR*** in ***Watson v. British Boxing Board of Control [2005] 2 WLR 1256*** observed that:

> "the duty to take reasonable care to prevent further harm and to effect a cure is founded on the acceptance of the patient as a patient, which carries with it an implicit undertaking to care for the patient's needs."

[31] It is therefore accepted that the appellant as her doctor and holding himself out as possessing specialist skill and knowledge, owed Mrs. Lorde a duty to use diligence, care, knowledge, skill and caution in administering treatment to her since he accepted the responsibility and undertook the treatment and she submitted to his direction and treatment: ***R v. Bateman [1925] 94 LJ KB 791*** per **Lord Hewatt CJ.**

[32] However the onus of proving breach of that duty lay with Mrs. Lorde. It was incumbent upon her to establish on a balance of probabilities that the appellant was negligent and that that negligence caused or materially contributed to the damage complained of. But the standard of civil proof is a balance of probabilities. If the evidence shows a balance in favour of something having happened then it is proof that it did in fact happen: per **Lord Reid** in **Davies v Taylor [1974] AC 207** at **212.**

[33] The standard by which medical professionals are judged with respect to negligence was enunciated by **McNair J. in *Bolam v. Friern Hospital Management Committee [1957] 2 All ER 118*** at ***121*** and ***122***:

> "But where you get a situation which involves the use of some special skill or competence, then the test whether there has been negligence or not is not the test of the man on the Clapham omnibus, because he has not got this special skill. The test is the standard of the ordinary skilled man exercising and professing to have that special skill. A man need not possess

the highest expert skill at the risk of being found negligent … it is sufficient if he exercises the ordinary skill of an ordinary man exercising that particular art.

A doctor is not guilty of negligence if he has acted in accordance with a practice accepted as proper by a **responsible** body of medical men skilled in that particular art… Putting it the other way round, a doctor is not negligent, if he is acting in accordance with such a practice, merely because there is a **body of opinion** that takes a contrary view." (Emphasis added)

- the eponymous **"Bolam test".**

[34] The court must therefore determine whether, on the evidence before it, the "body of opinion" which approved of the appellant's conduct could be said to be "responsible". Following **Lord Scarman** in ***Sidaway v. Bethlehem Royal Hospital Governors [1985] AC 871*** at ***881***:

"The Bolam principle may be formulated as a rule that a doctor is not negligent if he acts in accordance with a practice accepted at the time as proper by a responsible body of medical opinion even though other doctors adopt a different practice. In short, the law imposes the duty of care; but the standard of care is a matter of medical judgment."

[35] Having affirmatively determined (paras [2] & [3] of the judgment) that a duty of care was owed to Mrs. Lorde by the appellant, the judge observed that the answers to the consequential questions were "largely predicated" upon the court's analysis and resolution of the area of conflict to be found in the experts' testimony. These questions which we propose to reconsider and which will in the process take account of the appellant's grounds of appeal are:

1. Was there medical negligence and was it the cause of Mrs. Lorde's infection?

2. Was infection the cause of her stroke?

[36] The judge had to consider the evidence of a number of eminent persons who were called to give expert medical evidence on both sides. For Mrs. Lorde there were Professor Errol Ricardo Walrond, Professor Emeritus of Surgery and Professor Kester Nedd, Associate Professor of Neurology, Orthopaedics and Rehabilitation at the University of Miami. On the appellant's side were Dr. Gerald Joseph Jarvis, a consultant gynaecologist and surgeon in the United Kingdom; Dr. Michael Sean Marquez, a consultant neurologist epileptologist and electrodiagnostician and Dr. John Gill, also a consultant neurologist. Giving evidence on behalf of the Bayview Hospital were Dr. Alexander McIntosh Geddes, Emeritus Professor of Infection at the University of Birmingham, England and Dr. Jenny Eltora Bennett, obstetrician/gynaecologist. Two reports dated 20 April and 19 September 2005 by Dr. Richard Ishmael, consultant cardiologist, were also admitted in evidence for the consideration of the court. However no oral evidence was led from him.

[37] The judge faced with alternate views and opinions of the medical experts, stated which opinions (on the balance of probabilities) she found to be preferable. At paragraphs [49], [50] and [51] she stated:

"49. It is accepted that in the final analysis the findings of this Court will be largely predicated on the court's analysis of the expert testimony and how it resolves the areas of conflict in the same.

50. Counsel for the First Defendant drew the Court's attention to the authority of ***Loveday v. Renton and Wellcome Foundation Ltd [1990] 1 Med LR*** in which said case Justice Stuart Smith speaks to the proper approach to be taken by the court in examining the evidence of expert witnesses as follows:

"…The Court has to evaluate the witness and the soundness of his opinion. Most importantly, this involves an examination of the reasons given for his opinions and the extent to which they are supported by the evidence. The judge also has to decide what weight to attach to a witness' opinion by examining the internal consistency and logic of his evidence; the care with which he has considered the subject and presented the evidence; his precision and accuracy as demonstrated by his answers; how he responds to searching and informed cross-examination and in particular the extent to which a witness faces up to and accepts the logic of a proposition put in cross-examination or is prepared to concede points that are seen to be correct; the extent to which a witness has conceived an opinion and is reluctant to re-examine it in the light of later evidence, or demonstrates a flexibility of mind which may involve changing or modifying opinions previously held; whether it is biased or lacks independence."

51. This extract has been of invaluable aid in assisting me in the evaluation of the experts' testimony. In so doing, I have been particularly impressed with the evidence of Professor Geddes and Dr. Eltora Bennett and to a slightly lesser extent that of Dr. Nedd, while examining carefully what was said by all."

[38] The legal authorities indicate that the assessment of medical risks and benefits is a matter of clinical judgment which a judge would not be able to make without expert evidence ***(*Lord Browne-Wilkinson in *Bolitho v. City and Hackney Health Authority [1997] 4 AllER 771)*** but the judge must refrain from using a preference for the practice of one body of respectable medical opinion over another as a basis for making a determination of medical negligence:

> "It is not enough to show that there is a body of competent professional opinion which considers that there was a wrong decision if there also exists a body of professional opinion equally competent which supports the decision as reasonable in the circumstances".

per **Lord Scarman in *Maynard v. West Midlands Regional Health Authority (1984) 1 WLR 634.*** He also observed at page 639:

> "… in the realm of diagnosis and treatment negligence is not established by preferring one respectable body of professional opinion to another. Failure to exercise the ordinary skill of a doctor (in the appropriate specialty if he be a specialist) is necessary."

[39] However, it is only where a judge can be satisfied that the body of expert opinion cannot be logically supported at all that such opinion will not provide the benchmark by reference to which the defendant's conduct falls to be assessed: per **Lord Browne-Wilkinson in *Bolitho (supra).*** For as stated by **Bingham LJ *in Eckersley v. Binnie (1988) 18 Con LRI:***

> "In resolving conflicts of expert evidence the judge remains the judge, he is not obliged to accept evidence simply because it comes from an illustrious source, he can take account of demonstrated partisanship and lack of objectivity. But save where an expert is guilty of a deliberate attempt to mislead (as happens only very rarely), a coherent reasoned opinion expressed by a suitably qualified expert shall be the subject of a coherent reasoned rebuttal, unless it can be discounted for other good reasons".

[40] The court also has to bear in mind the warning given by **Lord Bridge of Harwich** in ***Wilsher v. Essex Area Health Authority [1987] QB 730:***

> "Where expert witnesses are radically at issue about complex technical questions within their own field and are examined and cross examined at length about their conflicting theories, I believe that the judge's advantage in seeing them and hearing them is scarcely less important than when he has to resolve some conflict of primary fact between lay witnesses in purely mundane matters".

[41] In ***Bolitho*** it was accepted that a particular course of action, which had not been adopted, could have prevented the occurrence of cardiac arrest leading to brain damage. There was, however, a sharp conflict between the plaintiff's experts who claimed that they would have administered the relevant treatment, and those of the defendant who claimed that, without the benefit of hindsight, they would not have done so: the treatment itself not being risk free.

[42] The House of Lords emphasized that the court had to be satisfied that the expert evidence represented in the words of **Lord Browne-Wilkinson**, a "defensible conclusion" following a focused comparison of "risks and benefits". His Lordship concluded:

> "… the court is not bound to hold that a defendant doctor escapes liability for negligent treatment or diagnosis just because he leads evidence from a number of medical experts who are genuinely of opinion that the defendant's treatment or diagnosis accorded with sound medical practice …if, in a rare case, it can be demonstrated that the professional opinion is not capable of withstanding logical analysis, the judge is entitled to hold that the body of opinion is not reasonable or responsible."

[43] The literature on medical negligence e.g. Medical Negligence by Michael Jones (3rd edition) posits that in the case of post-operative infection, the infection itself cannot be treated as evidence of negligence, because it cannot be guaranteed that post-operative infection will not occur. It is however not unreasonable to expect that specialists should be quick to recognise the development of complications following surgery, such as infection, at the earliest possible moment and to treat them accordingly. In other words the fault lies not with the risk or development of infection but with the failure to recognise that it is present and to take steps as quickly as possible to treat it. This position was reiterated by the medical experts in this case.

[44] The evidence reveals that the fact that Mrs. Lorde remained febrile throughout her first hospital stay ought to have alerted the appellant to possible post operative infection. This infection was subsequently confirmed when the appellant himself made the diagnosis of postoperative pyrexia secondary to infection.

[45] Mrs. Lorde had entered hospital with a premature rupture of her membranes, meconium staining and a temperature of 99º F. It was noted that preterm rupture of the membranes can be caused by infection. The appellant pleaded and it was accepted by the medical experts that meconium staining is a natural incidence of childbirth and a temperature of 99º F in the presence of ruptured membranes is not abnormal. This is so especially given that the normal human core temperature is universally accepted as 98.6º F. Consequently such circumstances do not mandate the administration of parenteral antibiotics.

[46] The possible infection as a result of preterm rupture of the membranes was therefore an occurrence of which the appellant as a specialist ought to have been mindful and been prepared to treat as early as possible. In other words whether the infection was as a result of preterm rupture of the membranes or as a result of the operation, the appellant as a medical specialist ought to have been alerted to the possibility of infection and made allowances for treatment.

[47] At the time of surgery on 3 January when he prescribed the antibiotic Amoxicillin, the appellant did not himself check to ensure that it had been administered. In fact it was subsequently discovered to have been administered only two days after surgery. In addition to denouncing this inaction on the part of the appellant, the experts considered the efficacy of the antibiotic prescribed and administered. For the most part they agreed that it was not the most appropriate in the setting of a surgical procedure like a caesarian section given the discovery that it is an antibiotic that most bacteria are generally resistant to. In addition it was made clear that the oral form of the drug would not be adequate to completely treat the infection in light of the patient's condition at the time. The judge determined it to be "a poor (though not ridiculous) choice of antibiotics".

[48] On readmission on 9 January, following the appellant's diagnosis of post-operative pyrexia secondary to infection, Mrs. Lorde was intravenously administered two antibiotics over a period of three days. A complete blood count and sputum were taken on 10 January and reported to be sterile after 48 hours incubation. The opinion of the experts was that the antibiotic having been administered prior to taking the cultures resulted in the suppression of the bacteria and the masking of any infection present in Mrs. Lorde's system, thus making it difficult for appropriate treatment to have been administered.

[49] As indicated above (paras. 16 and 17), Mr. Forde's criticism of the judge's decision centred around his view that the judge had failed to evaluate the evidence, deal with the inconsistencies and say how she arrived at her conclusion. He considered that the Court of Appeal had now to analyse the evidence of all of the experts in order to determine what the judge's findings could be supported in the evidence of the experts.

[50] It is our judgment, however, that in coming to her decision the judge would have considered the evidence and opinions of the medical experts, the relevant parts of which we have determined were critical to that decision and which we have set out below.

[51] Professor Walrond in his evidence quite fully explained the way in which the infection developed in Mrs. Lorde and could have caused the resulting stroke. He also concluded that the standard of care given by the appellant fell below the expected standard of care. He noted that there was absence of evidence that the appellant had examined the patient especially in relation to the area and site where the operation was done or to take into account other possibilities. He stated that in some conditions of sepsis there will be temperature swings – usually up in the afternoon and back down in the morning – and in a post-operative case, it would suggest that the patient had an infection and it would be necessary to ascertain where the infection is located. Mrs. Lorde having had a pelvic operation, there ought to have been an examination conducted of the pelvis and the abdomen. There was no evidence that this had been done.

[52] He observed that chest infections are possible after an operation; that deep vein thrombosis is possible and can produce a temperature without actually having an infection. He stated that sometimes the site where the drip is inserted could produce a site for infection and Mrs. Lorde having had a pelvic operation, there ought to have been an examination conducted of the pelvis and of the abdomen. He added that in light of the swinging temperatures and the onset of diarrhea, Mrs. Lorde ought not to have been discharged from the hospital before these conditions had been investigated and resolved.

[53] Professor Walrond decried the lack of recorded information to evidence the steps taken by the appellant in his treatment of Mrs. Lorde. In fact other experts lamented the absence by the appellant of the accepted practice of doctors to make notes of procedures done and medicines prescribed. They considered it wholly unacceptable that reliance had to be placed on the nurses' records.

[54] On the issue of the two occasions on which Mrs. Lorde was discharged from Bayview Hospital, Dr. Jarvis while of the view that the nurses' records suggested a patient who was clinically improving and it was "wholly permissible" in his opinion for Mrs. Lorde to have been allowed to go home, he "respected" the view of others who would have been more cautious and kept Mrs. Lorde in hospital.

[55] In his written opinion produced to the court, Dr. Jarvis stated that any patient after caesarian section could develop an infection which may be coincidental to the caesarian section, but given episodes of pyrexia post caesarian section, it would be reasonable to presume that if there was a septic embolus, it related somehow to the caesarian section. He reiterated the point made by Professor Walrond that some infection will be due to the caesarian section for instance, a chest infection or endometritis, but it is also possible to have an infection which is not due to the caesarian section. He stated that the only positive evidence of infection appeared to be pseudomonas in the chest and the chest infection was not uncommon after general anesthesia. In the circumstances the appellant would have been expected to treat that condition by administering antibiotics for five days. He like Professor Walrond noted the possibility of pelvic infection occurring at the site of the caesarian section which would be the equivalent of intrauterine infection introduced during the operation or after the placenta had been delivered. There is a raw area inside the uterus which can become infected with organisms from the woman's own vagina.

[56] Dr. Jarvis spoke to the suitability of the administration of antibiotics at the time of the operation. It was his considered opinion that it would reduce the incidence of wound infection and intrauterine infection in particular. He was also of the view that obstetricians should give prophylactic antibiotics to women who undergo caesarian section, regardless of whether it is elective or emergency surgery and regardless of the length of time of membrane rupture. The clearest response to the query whether the medical negligence was the cause of Mrs. Lorde's infection can be divined from his statement that the purpose of giving the patient prophylactic antibiotics was to reduce the risk of infection associated with the performance of caesarian section. In addition this antibiotic should be administered after the umbilical cord was clamped but before the end of surgery. He noted that although the appellant did prescribe prophylactic antibiotics there was delay in their administration and so in effect Mrs. Lorde did not receive the required prophylactic antibiotics.

[57] Dr. Jarvis observed that although the appellant had considered that there was infection he had not specifically stated where he believed the site of the infection to be. He suggested that blood cultures also should have been ordered to assist in identifying any micro-organisms. Dr. Jarvis also indicated that a midstream urine test ought also to have been done in order to determine whether there was urinary tract infection. The absence of written instructions or observations by the appellant did not allow him to say whether these steps had been taken.

[58] Dr. Geddes agreed with Dr. Jarvis about the administration of the prophylactic antibiotics immediately after the umbilical cord had been clamped. He went on to observe that in spite of the antibiotic, Mrs. Lorde's temperature remained elevated and a blood culture performed on the same day would have been helpful. He pointed to the fact that the high swing in fever during the second admission is "classically associated" with serious infection and/or septicaemia.

[59] He observed that Mrs. Lorde's discharge from the hospital on 13 January (2nd discharge) had been triggered by one normal temperature and echoing Professor Walrond, he stated that this was not the sort of response to antibiotics that is expected in a sick patient in a temperature crashing down overnight, having been swinging for several days. He felt that even had Mrs. Lorde remained in hospital this "up and down" pattern would have continued. He stated that it was generally accepted that in the management of sick infected patients they should be kept in hospital for at least 24 hours after the temperature had returned to normal.

[60] Dr. Geddes was of the view that Mrs. Lorde suffered from a uterine infection, that her post-operative illness was a continuum from pelvic infection which was associated with inappropriate prophylaxis associated with septicaemia from which she did not receive an appropriate length of treatment with intravenous antibiotics.

[61] He considered that the appellant's management of the infection fell below an acceptable level of medical practice.

[62] Neither Dr. Marquez nor Dr. Gill offered any assistance in relation to the question of whether there was medical negligence. However, Dr. Marquez in his first report stated that on the balance of probabilities, Mrs. Lorde likely had a pelvic infection resulting in septicaemia. He said that from his investigations there was no evidence from where Mrs. Lorde's primary source of infection had come.

[63] Dr. Bennett reiterated the position of Drs. Geddes and Jarvis with respect to the administration of antibiotics as well as the type of antibiotics when a patient was having a caesarian section. In her written opinion, she noted that early indications of developing sepsis, namely swinging temperatures, appear to have been missed. She too was of the view that the appellant's management of Mrs. Lorde fell below the accepted standards of medical care. She agreed that it would have been correct to have monitored Mrs. Lorde for at least 24 hours to ensure that her temperature had settled because swinging temperatures indicate a significant infection or an abscess formation.

[64] Professor Nedd iterated that because the early signs of sepsis namely tachypnoxia (breathing fast) and tachycardia (elevated heart rate) were present during Mrs. Lorde's first hospital admission her discharge should have been delayed. He also agreed with the other experts that the antibiotic Amoxicillin prescribed during this admission was not appropriate. He was also of the view that Mrs. Lorde had been prematurely discharged from hospital.

[65] The court is of the view that a specialist exercising the skill which the appellant is expected to have would have followed the "normal practices" referred to by the medical experts.

[66] The experts pointed to the fact that there was no indication in many instances that the appellant had carried out certain procedures or conducted relevant examinations. There was also doubt as to whether on discharge after the second hospitalization, Mrs. Lorde had left the hospital with medication and a follow-up appointment. The experts were generally of the opinion that the appellant's record keeping during and after surgery left a great deal to be desired.

[67] The appellant did indeed admit that there were lacunae in his records in relation to what procedures he followed in the treatment of Mrs. Lorde or in some instances whether he examined her and what his findings were. He spoke of giving orders, oral and written, to the nurses for administering medication but conceded that he failed to follow up to see whether his instructions had been carried out.

[68] While in our opinion the absence of notes and the inadequacy of written instructions were not in themselves evidence of negligence, it leaves open the question whether, and the possibility that, the appellant had in fact not followed the relevant procedures and had not conducted the appropriate examinations.

[69] We are satisfied that the relevant practice and procedures appropriate to the treatment of the infection which afflicted Mrs. Lorde were not followed by the appellant. ***In Rhodes v Spokes and Farbridge (1996) 7 Med LR 135*** **Smith J** said:

> "A doctor's contemporaneous record of a consultation should form a reliable evidential base … The failure to take a proper note is not evidence of a doctor's negligence or of the inadequacy of treatment. But a doctor who fails to keep an adequate note of a consultation lays himself open to a finding that his recollection is faulty and someone else's is correct. After all, a patient has only to remember his or her own case, whereas the doctor had to remember one case out of hundreds which

occupied his mind at the material time".

[70] In our view therefore there was a failure to exercise reasonable skill and care in carrying out the relevant examination of Mrs. Lorde in order to ascertain her condition. This therefore resulted in a failure to properly assess the risks and to take the appropriate steps. This lack of reasonable skill and care culminated in the decision to prematurely discharge Mrs. Lorde on two occasions before her condition had been properly ascertained and stabilized. This negligence on the part of the appellant thus led to the inappropriate treatment of the infection which Mrs. Lorde had contracted.

[71] We accept the opinions expressed by the majority of the experts that if Mrs. Lorde had been given appropriate peri-operative antibiotic proplylaxis, the pelvic infection would have been prevented. Further, if appropriate investigations and treatment for possible septicaemia had been initiated during Mrs. Lorde's second admission to Bayview Hospital, the septicaemia would have been controlled.

[72] We are satisfied that based on the evidence reviewed here, the judge was correct in her findings that Mrs. Lorde contracted an infection as a result of poor management and that there was a general failure to properly manage the situation to determine and treat the source or cause of the infection (paras [52] to [55] of the judgment**).**

[73] The main thrust of the appellant's appeal relates to the issue of causation, namely that the evidence does not support the judge's determination that the stroke suffered by Mrs. Lorde was as a result of infection or any negligent treatment by the appellant. Mr. Forde, QC stated that he conceded that there had been infection when Mrs. Lorde was at the Bayview Hospital. However, according to him, as a result of medication prescribed by the appellant on her discharge, that infection had been resolved by the time of her admission to the Queen Elizabeth Hospital on 21 January and even if it had not been resolved, there was no evidence that infection caused the stroke. He noted that the effectiveness of the antibiotics could be realized from the evidence that the blood cultures taken at that time were sterile. He argued that because Mrs. Lorde was in the puerperium – within six weeks after childbirth – the risk of a stroke was elevated because during that period, the blood would clot and could result in a thrombotic stroke which in his opinion and based on the medical evidence was what had occurred. There was therefore no evidence that the stroke suffered by Mrs. Lorde was septic in origin.

[74] The judge determined that she could conclude that there was negligence in so far as the doctor was concerned if she found **as a fact** that there was a chain of causation establishing liability. She clearly identified that there was a need for her to find that there was a direct causal link between the caesarian section, the infection and the stroke. The judge in paras. [11] and [12] of her judgment stated:

> "[11.] There must be a causative link between the negligence and the injury. Simply put, this means that the plaintiff must prove that the defendant's negligence **caused** his injury or loss, not merely that the defendant has been negligent. It is difficult in matters of medical negligence as there is unlikely to be conclusive scientific knowledge of how precisely the various causes took effect and led to the plaintiff's injuries. **The court is forced to speculate according to degrees of probability, and ultimately to state a preference for one proposition over another.**
>
> 12. Causation is the linch-pin in the circumstances of this case as in the final analysis liability can only be established if this court makes a finding of fact that there is a chain of causation establishing liability. In other words, that there is a direct causal link between the Caesarian section, the infection and the stroke."

[75] The legal authorities on medical negligence affirm the principle that the onus of proving causation lies on the claimant. There must be inferred from the facts that the defendant's negligence had caused or materially contributed to the claimant's injury. Thus causation is an issue of fact to be determined according to evidence but the criteria for its determination raise issues of law in which the burden of proof is on the claimant and the standard of proof is the balance of probabilities. However the determination of the issue of causation is independent of the determination of negligent conduct.

[76] **Lord Hoffmann** in ***Gregg v. Scott [2005] WLR 268*** observed:

> "The law regards the world as, in principle, bound by laws of causality. Everything has a determinate cause, even if we do not know what it is. The blood starved hip joint in ***Hotson*****,** the blindness in ***Wilsher*** the mesothelioma in ***Fairchild;*** each had its cause and it was for the plaintiff to prove that it was an act or omission for which the defendant was responsible … The fact that proof is rendered difficult or impossible because no examination was made at the time, as in ***Hotson*** or because medical science cannot provide the answer, as in ***Wilsher,*** makes no difference. There is no inherent uncertainty about what caused something to happen in the past or about whether something which happened in the past will cause something to happen in the future. Everything is determined by causality. What we lack is knowledge, and the law deals with lack of knowledge by the concept of burden of proof."

[77] The House of Lords held in ***Bonnington Castings Ltd v. Wardlaw [1956] AC 613*** that the claimant does not have to prove that the defendant's breach of duty was the sole or even the main cause of damage, provided he can demonstrate that it made a material contribution to the damage, that anything which did not fall within the principle ***de minimis non curat lex*** would constitute a material contribution.

[78] However, before an inference can be drawn that the defendant's breach of duty made a material contribution, there must be some evidence to link the defendant's breach of duty to the claimant's harm other than the simple assertion that it increased the general risk of harm.

[79] In ***Tahir v. Haringey Health Authority (1998) Lloyds's Rep.Med 104*** the claimant alleged that the delay in providing medical treatment rendered his condition worse than it would otherwise have been, on the basis that, in general terms, delay in operating in his type of case increased the neurological defect and impaired the prospect of recovery. The Court of Appeal held that where there has been negligence in delayed medical treatment, it was not sufficient for the claimant to show that there was a material increase in the risk or that delay can cause damage. He has to go further and prove that some measurable damage was actually caused by the delay.

[80] It is therefore not enough to show that the appellant's negligent treatment of Mrs. Lorde increased the likelihood of the resulting stroke and **may** have caused it. It must be proved on a balance of probabilities that the appellant's negligent treatment **did** cause the stroke in the sense that it would not otherwise have happened: per **Lord Hoffmann** in ***Barker v. Corus UK plc [2006] 2 WLR 1027.***

[81] In ***Joyce v. Merton, Sutton and Wandsworth Health Authority (1996) 7 Med. LR1,*** the claimant underwent an operative procedure which resulted in a partially occluded artery, leading three months later to an upper brain stem infarction causing almost total paralysis. Although the procedure was not necessarily negligent, the Court of Appeal considered that the immediate follow up care that the claimant received was negligent, in that he was discharged from hospital without proper instructions and advice. It was accepted that the only thing that could have prevented the damage was if within 48 hours the claimant had been seen by a vascular surgeon and the surgeon had decided to operate to deal with the occlusion.

[82] The Court of Appeal held that to succeed on causation, the claimant had to prove either that had the vascular surgeon at the hospital been summoned he would in fact have re-operated or that it would have been negligent for him not to do so. **Hobhouse LJ** said that where the negligence consisted of an act which is alleged to have had physical consequences, the question to be asked is straightforward even though the answer may not be: was the act a cause of the injury.

[83] The Court of Appeal further held that the case fell into the category of cases where the question is what steps would have been implemented if proper care had been taken. **Hobhouse LJ** at page 152 summarised the position in the following terms:

> "Thus a plaintiff can discharge the burden of proof on causation by satisfying the court *either* that the relevant person would in fact have taken the requisite action (although she would not have been at fault if she had not) *or* that the proper discharge of the relevant person's duty towards the plaintiff required that she take that action. The former alternative calls for no explanation since it is simply the factual proof of the causative effect of the original fault. The latter is slightly more sophisticated: it involves the factual situation that the original fault did not itself cause the injury but that this was because there would have been some further fault on the part of the defendants; the plaintiff proves his case by providing that his injuries would have been avoided if proper care had continued to be taken… Properly viewed, therefore, this rule is favourable to a plaintiff because it gives him two routes by which he may prove his case – either proof that the exercise of proper care would have necessitated the relevant result, or proof that if proper care had been exercised it would in fact have led to the relevant result."

[84] It has been established that where the issue is whether the claimant's medical condition would or would not have deteriorated with appropriate treatment, it is not simply a question of opting for the view of the majority of experts or of a reasonable body of medical opinion. In other words the Bolam test is not applicable to the question of causation. In ***Fallows v. Randle (1987) 8 Med L R 160,*** **Stuart-Smith LJ** stated:

> "In my judgment that principle (Bolam) has really no application where what the judge has to decide is, on balance, which of two explanations for something which undoubtedly occurred … is to be preferred. That is a question of fact which the judge has to determine on the ordinary basis on a balance of probability. It is not a question of saying whether there was a respectable body of medical opinion here which says that this can happen by chance without any evidence, it is a question for the judge to weigh up the evidence on both sides, and he is, in my judgment, entitled in a situation like this, to prefer the evidence of one witness to that of the other."

[85] After having noted that the issue of whether the infection caused the stroke "posed a great challenge" the judge continued at page 56:

> "It is in this area that one finds some measure of inconsistency and a lower level of certainty, in the various opinions of the experts".

[86] It has however been stated that the courts have traditionally rejected an over-analytical approach to the question of causation:

> "The object of the civil enquiry into cause and consequence is to fix liability on some responsible person and to give reparation for damage done… the trial of an action is not a scientific inquest into a mixed sequence of phenomena … It is a practical inquiry": per **Lord Sumner** in ***Weld-Blundell v Stephens [1920] A C 956*** at ***986.***

In other words, what or who has caused a certain event to occur is essentially a practical question of fact which can best be answered by ordinary common sense and human intuition: per **Lord Salmon** in **Alphacell Ltd v Woodward [1972] AC 824** at **847.**

[87] Mr. Forde further contended that of the experts, Drs. Gill and Marquez, both neurologists, were essentially in the best position to speak to the cause of the stroke since a stroke is a neurological event. He suggested that the finding by Professor Walrond of the chain of causation: pelvic infection – endocarditis – stroke - was flawed. He noted that neither Dr. Ishmael, a cardiologist, nor Professor Geddes, an expert in infectious diseases, found any evidence of endocarditis.

[88] A review of the evidence given by both Dr. Gill and Dr. Marquez will in our opinion reveal that they gave self conflicting evidence in some instances and in others, evidence conflicting of each other. It is evident that despite their impeccable credentials and vast medical experience, the judge, while not totally dismissive of their evidence, seemed to approach their evidence with a certain degree of caution, preferring instead the evidence proffered by other experts: see paras [40], [51], [57] and [58] of the judgment.

> [89] The existence of a body of medical opinion, in this case Drs. Gill and Marquez, that considered that the infection did not cause the stroke or that they were unsure of the cause of the stroke does not mean that there cannot be and that there does not exist a responsible body of medical opinion holding the contrary view. Furthermore the judge's advantage in seeing and hearing the experts under examination and cross-examination was important when she had to resolve the conflict in their evidence. This advantage was pointed out by **Bingham LJ** in ***Eckersley v. Binnie (supra)*** at para [39] above and by **Lord Bridge** in ***Wilsher (supra)***at para [40] above.

[90] It is to be noted that Dr. Gill in his oral evidence admitted to having been involved in the management of Mrs. Lorde from 22 January during the first fortnight of her stay in Q.E.H and during which she had been treated for sepsis. Four months later in April, he forwarded a report to Dr. Nedd in Miami requesting that she be accommodated in Dr. Nedd's stroke/brain injury rehabilitation programme. In that letter which endorsed the causal link between sepsis and the stroke he informed Dr. Nedd:

> "A CT scan demonstrated a left sided haemorrhagic infarct which was thought to be secondary to a septic endocardial embolus, which arose was a consequence of bacterial endocarditis".

[91] Some six years later he submitted a report practically refuting that first report. On this occasion he stated:

> "It is well documented in the medical literature that the puperium is a period when the risk of stroke is elevated. The risk of both ischaemic stroke and intra-cerebral haemorrhage are increased during this period. Review of the literature to identify the risk factors for stroke in pregnancy and the puperium revealed that increased maternal age, African-American ethnicity, preeclamsia, caesarean section delivery, gestational hypertension, lupus, and migraine.
>
> Pregnancy and the puperuim are characterized by hypercoagualbility of the blood and it is thought that this is one of the significant pathophysiological factors which increases the risk of stroke after childbirth. This hypercoagualbility and the other cardiovascular adjustments which accompany pregnancy do not resolve for up to six weeks after delivery.
>
> On examination of the facts of this case the risk factors for stroke are maternal age (age greater than 40 yrs at delivery), caesarean delivery, and African ethnicity. Although there was a history of puperial sepsis this was treated with antibiotics and there was no evidence of disseminated sepsis when this lady was admitted to the Queen Elizabeth Hospital".
>
> Then he concluded:
>
> "On review of the facts this lady --- three of the factors which independently increase the risk of puperial stroke were present; namely high maternal age, caesarian section and African ethnicity. It would seem that this lady was a prime candidate for pregnancy related stroke".

[92] Under cross-examination he stated that his original diagnosis which had been forwarded to Dr. Nedd for the purposes of treatment was erroneous i.e. left side haemorrhagic infarct thought to be secondary to a septic endocardial embolus which arose was as a consequence of bacterial endocarditis. That had been his opinion at the time. He also admitted that his hospital notes did not reflect that Mrs. Lorde was a prime candidate for a postpartum stroke. Dr. Gill also indicated that less than 5% of strokes which occur are as a result of infection. In re-examination by Mr. Forde he noted that:

> "It is evident that the lady presented with a stroke and at the time …she was still within 6 weeks of having delivered these children, and therefore by definition or implicitly that would actually be a postpartum stroke. You can then pick over whatever you thought might have been the cause of it, but by definition that is what it is, because it occurred within 6 weeks of birth".

[93] It was the argument of Mr. Forde that Dr. Gill properly resiled from his initial opinion in 1999 after the report of Dr. Ishmael, cardiologist, established that Mrs. Lorde had no history of heart disease. He contended that the judge in keeping with the guidelines laid down by **Stuart-Smith LJ** in **Loveday** ought to have decided what weight to attach to Dr. Gill's opinion by examining the extent to which Dr. Gill having conceived an opinion in 1999 was not now reluctant to re-examine that opinion in the light of later evidence. He further contended that the judge ought to have acknowledged the fact that Dr. Gill was now demonstrating "a flexibility of mind" which involved changing/modifying his previously held opinions.

[94] In our opinion it is unsatisfactory that Dr. Gill as the attending neurologist in 1999 and thus with an intimate knowledge of Mrs. Lorde's case would take 6 years to come to an almost diametrically opposite conclusion to the one he had at the time of undertaking Mrs. Lorde's care.

[95] Dr. Gill's accepted erroneous judgment in 1999 which he considered retrospectively and for which it is admitted he established in 2005 justification for his interpretation of Mrs. Lorde's condition at the time, could in fact be construed as fulfilling the **Loveday** guidelines. However as stated by **Morris LJ** in **Roe v Minister of Health [1954] 2 QB 66** at page **82:** "care has to be exercised that conduct in [1999] is only judged in the light of knowledge which then was or ought to have been possessed. The then existing state of medical (knowledge) must be had in mind". In other words, the duty of care is determined by the state of medical knowledge and practice at the time of the alleged negligence. We are satisfied that the judge having noted that the guidelines in **Loveday** had been of "invaluable" assistance in her evaluation of the experts' testimony, determined what weight should be given to Dr. Gill's evidence.

[96] Under cross-examination Dr. Gill disagreed with Dr. Marquez who in his first report had stated that Mrs. Lorde's septicemia which continued and persisted predisposed her to having a septic haemorrhagic infarct on the left parietal lobe which was initially manifested as right sided weakness and numbness followed by a secondarily generalized tonic clonic seizure.

[97] While agreeing with Dr. Marquez on the etiology between source infection and brain damage he disagreed that it was relevant to Mrs. Lorde's case. Dr. Marquez had stated:

> "Septic emboli and resulting cerebral infarction and associated with a distant focus of infection, most often within the chest, but also occurring from wound and skin infections, infections in bone (osteomyelitis), pelvic infection (as I believe in this case), gall bladder, intraabdominal sepsis".

[98] There was some conflict between the experts as a result of the assertion by Dr. Gill in his report of 2005 that the stroke was more likely to have been pregnancy related as a consequence of the predisposing factors relevant to Mrs. Lorde's case namely that she was within the puerperium, she was of high maternal age (43), she was of African descent and she had recently delivered by caesarian section. Dr. Gill had noted in that report that "it is well documented in medical literature that the puerperium is a period when the risk of stroke is elevated." Dr. Marquez while he accepted that it was "well documented" did not agree with the statement but had "no difficulty with it being expressed." The statement was also accepted by Dr. Bennett but she indicated that the overall incidence of pregnancy related strokes is "still low". Professor Nedd who had himself written a paper on this area of pregnancy noted that the greater evidence shows that in the six weeks following pregnancy there is likely a slightly higher risk but not a significant risk. He considered the statement by Dr. Gill to be highly controversial and although it is documented in literature it is not "well documented". He said that there is much debate in the medical literature as to whether in the puerperium period there is significant risk from stroke.

[99] In his oral testimony, Dr. Gill noted that his initial report related to "the mind" he had of the "underpinning of the cause of the stroke at the time". He subsequently reviewed and audited his notes and came to a new conclusion about the stroke. He indicated that it was by way of researching the literature and also appreciating that when the evidence was scrutinized, there was no unequivocal, objective evidence that spoke of a particular source of infection.

[100] Dr. Gill had also in his report written that the risk of both ischaemic stroke and intra-cerebral haemorrhage are increased during the puerperium. Professor Nedd produced a contrary view. He stated that the risk of ischaemic stroke is less than there is so far with haemmorhagic stroke or a cerebral haemorrhage. He indicated that the literature suggested that with respect to the risk in the postpartum period, it is more likely for there to be a history of haemorrhage with a primary haemorrhage "versus" an ischaemic stroke. He noted that there is data to support this. He was not of the view that the risks are both equivalent in the different types of stroke. He noted that the risk factor in pregnancy is not an isolated risk, there are coexisting factors.

[101] Dr. Marquez, in relation to risk factors, had stated that Mrs. Lorde was:

> "A 43 year old woman who has no risk factors for an infarct in the first place, first of all much higher than if she was a hypertensive, diabetic person. Her only risk factor for having a stroke was high cholesterol. She is 43. As a neurologist, when we see that, we worry about all other causes of stroke. It is never a simple thing. If someone is over 50 to 55 and they have a stroke, it is less worrisome, because there are usually risk factors involved like hypertension, diabetes, high cholesterol and genetic risk factors, but when they are young, the sky is the limit as to the cause."

[102] Dr. Marquez also stated that Mrs. Lorde having no risk factors for stroke except high cholesterol, the risk of her having other less common causes of stroke increased significantly, including septic embolism.

[103] In our judgment if Dr. Gill's opinion is to be accepted, the appellant, being a specialist in his field, ought to have been aware of the possible increased risk to Mrs. Lorde because of her being in the puerperium and also because of her ethnicity, age, and the caesarian section. He ought then to have instituted the appropriate prophylactic measures to take account of these factors when Mrs. Lorde was at the Bayview Hospital in his care. It is our conviction therefore, that given these considerations, if appropriate investigation and treatment for possible sequelae had been carried out the resulting neurological damage would have been prevented.

[104] It was for the judge to determine whose evidence she preferred. Having reviewed the evidence we are of the opinion that even while the judge did not specifically state by whose testimony she had been persuaded, it is evident that she concluded that there being no evidence of Mrs. Lorde having coexisting factors to increase her risk of stroke, she was not convinced by the opinions of Dr. Gill that the stroke was pregnancy related. In our view, Professor Nedd's evidence and explanations were more cogent.

[105] Taking into account that the judge had indicated that the approach of **Stuart-Smith LJ** in **Loveday v. Renton (supra)** had aided in her evaluation of the experts' testimony, and being mindful that it was she who had the advantage of seeing and hearing the witnesses and observing their demeanour, we see no ground for disputing the evident conclusion to which she had come regarding Dr. Gill's evidence in this instance.

[106] In the case of Dr. Marquez, his first report of 16 September 2005 was comprehensive. His review included Mrs. Lorde's hospital admissions – both Bayview Hospital and Queen Elizabeth Hospital - the medical records, Mrs. Lorde's medical history and other investigations carried out. His diagnosis on that occasion was:

> "It is clear to me that Mrs. Corine Lorde has sustained a severe cerebral insult as a result of her septic hemorrhagic infarct in the left parietal lobe".

[107] In that report, he also submitted responses to specific questions which had been posed by Mr. Forde. When asked whether any brain damage or other cerebrovascular defect(s) which were noted could have been caused by infection, he answered in the affirmative. It was his opinion that she had an infection when she presented to the Bayview Hospital with prolonged rupture of membranes. (He later stated under cross-examination that he had grounded his opinion on the rupture of the membranes having been prolonged rather than premature although his later determination related to a premature rupture of fetal membranes). He stated that his opinion was that as the septicaemia having continued and persisted, this predisposed her to having a septic haemorrhagic infection of the left parietal lobe, which was initially manifest as right sided weakness and numbness, followed by a secondarily generalized tonic clonic seizure. In short, his opinion was that Mrs. Lorde's septic embolic haemorrhagic infarct in the left parietal lobe was as a direct result of her underlying infection.

[108] Dr. Marquez was also asked: In such an event, what is the likely source of the infection? More specifically, could the source of infection be abdomino-pelvic, and if so, what is the relevant probability? He noted that despite extensive evaluation at the Queen Elizabeth Hospital, a specific source of infection was not identified. He however reported:

> "On the balance of probabilities, I believe that Mrs. Corine Lorde sustained a septic embolic hemorrhagic left parietal lobe infarct associated with septicemia secondary to a pelvic infection followed a caesarian section, performed because of premature rupture of fetal membranes."

[109] In giving the etiology between some infection and brain damage, he explained that during sepsis or septicaemia, bacteria enter the blood stream from a remote source, likely to be the pelvis in Mrs. Lorde's case, and disseminate via the blood stream to the brain. He stated that the bacteria get impacted into one of the blood vessels and set up a thrombotic process which causes thrombosis and blockage of a more proximal vessel of the left middle cerebral artery. He also stated that occasionally, if these bacteria actually get lodged in various parts of the brain they can then produce a brain abscess. He stated:

> "In my opinion, on the balance of probabilities, I would state that Mrs. Corine Lorde likely had a pelvic infection resulting in septicemia, which subsequently led to bacteria being spread through the blood and being lodged in one of the proximal vessels of the left middle cerebral artery and causing thrombosis and blockage of this blood vessel."

[110] Dr. Marquez' second report of 5 October 2005, to which no specific reference was made by the judge and about which Mr. Forde complains, was written after Dr. Marquez had left the court, having given oral testimony and been cross-examined whereupon he "felt the need to clarify his position on the case". He stated: "What was asked and I believe needs to be answered was the fact that this particular case is extremely difficult when it comes to addressing an etiological cause for Mrs. Lorde's cerebral infarct". He then went on to state that the rationale for his belief that the reason for the haemorrhagic cerebral infarct was preexisting underlying sepsis was based on Occam's Razor otherwise known as Occam's Law of Parsimony which he curiously stated was occasionally wrong and it was important to understand that there were often possible explanations for Mrs. Lorde's haemorrhagic infarct involving the left parietal lobe. He then considered a number of possibilities and concluded that consequently he did not know the actual cause of Mrs. Lorde's cerebral infarct.

He indicated that because of this degree of uncertainty he wanted to convey that:

> "1. The true cause of Mrs. Corine Lorde's stroke is unknown;
>
> 2. No investigations have confirmed any etiological cause;
>
> 3. The likeliest cause is that her stroke was related to underlying sepsis (infection) and this was likely to be pelvic in origin. However, pelvic infection or infection from any other source for that matter was never actually confirmed on any confirmatory testing;
>
> 4. Any of the etiological causes from Mrs. Corine Lorde's stroke is uncommon, including sepsis related causes, adding to the degree of uncertainty in this very difficult case."

[111] He accepted that this degree of uncertainty bore striking contrast to the high level of certainty which was present in his first report.

[112] On completion of his testimony, Dr. Marquez confirmed that he "stood by" his original opinion from his first report that on the balance of probabilities, Mrs. Lorde likely had a pelvic infection resulting in septicaemia which subsequently led to bacteria being spread through the blood and being lodged in one of the proximal vessels of the left middle cerebral artery and causing thrombosis and blockage of the blood vessel.

[113] It is our view that the criticism of the judge for not specifically referring to this second report is not justified. What that report does is merely highlight Dr. Marquez' "degree of uncertainty" in pinpointing the cause of the stroke while reiterating what his initial opinion of the likeliest cause was – a pelvic infection which spread to the brain.

[114] The legal authorities indicate that, the appellant having himself determined that Mrs. Lorde suffered an infection, and the judge having found that this infection was the result of the appellant's negligence, it was for the judge to determine whether there was a casual link/a material contribution of that infection to the stroke before liability could be established.

[115] In the case of ***McGhee v. National Coal Board [1972] 3 All ER 1008,*** the claimant, who worked at the defendants' brick kilns, contracted dermatitis as a result of exposure to brick dust. The employers were not at fault for the exposure during working hours, but they were in breach of duty by failing to provide adequate washing facilities. This increased the period of time during which the claimant was exposed to contact with the brick dust while he bicycled home. It was agreed that the brick dust caused the dermatitis but the current state of medical knowledge could not say whether it was possible that the claimant would not have contracted the disease if he had been able to take a shower after work. It was determined that the failure to provide washing facilities materially increased the risk of the claimant contracting dermatitis. The House of Lords held the defendants liable on the basis that it was sufficient for a claimant to show that the defendants' breach of duty made the risk of injury more possible even though it was uncertain whether it was the actual cause. **Lord Reid** at page **1010** affirmed the law thus:

> "It has always been the law that a pursuer succeeds if he can show that fault of the defender caused or materially contributed to his injury. There may have been two separate causes but it is enough if one of the causes arose from fault of the defendant. The pursuer does not have to prove that his cause would of itself have been enough to cause him injury".

[116] A majority of the House treated "a material increase in the risk" as equivalent to "a material contribution to the damage". **Lord Simon** said that "a failure to take steps which would bring about a material reduction of the risk involves a substantial contribution to the injury". **Lord Wilberforce** was of the view that it is the creator of the risk who, ex hypothesi, must be taken to have foreseen the possibility of damage, who should bear the consequence.

[117] Before a review of the experts' opinion on the likeliest cause of the stroke is undertaken, we consider it necessary to refer to the hospital notes of the procedures at the Queen Elizabeth Hospital on Mrs. Lorde's admission on 21 January and subsequently, in order to help put the matter into perspective.

[118] On admission to the Queen Elizabeth Hospital, the diagnosis was documented as post partum pyrexia followed by hemiparesis; possible cerebral abscess/septic infarct. She was commenced on four different intravenous antibiotics. The next day, 22 January Dr. Love, the Senior Registrar, after a CT scan was done, noted "Left brain abscess, likely secondary to puerperal sepsis. The uterus is still relatively enlarged three weeks after caesarian section. This is unusual and may be a source of her infection". He requested an urgent neurosurgical opinion and arranged for ultrasound evaluation. After conferring with Dr. Welch, obstetrician/gynaecologist, it was determined that there was no need for surgical intervention but that antibiotics administration would continue.

[119] On the same 22 January, Mrs. Lorde's case was referred to Dr. Gill in the Neurosurgical Department. On examination of the CT scan, he reported:

> "Patchy haemorrhage within a zone of low density which is situated in the left parietal lobe and extends towards the superior temporal region. There is associated cerebral swelling and midline shift. This lady's neurological condition is due to a left haemorrhagic lesion. The possibilities are (i) haemorrhage into an infarct; (ii) haemorhage secondary to rupture of an arteriovenus malformation; (iii) haemorrhage into a septic infarct."

He continued:

> "As the haemotoma is not a confluent collection of blood, but rather a patchy mixture of blood and swollen brain I would not recommend surgical evacuation at this time."

[120] On 23 January, Dr. Love noted that Mrs. Lorde's condition was much the same, she was now under neurosurgical management and obstetrical/gynaecological observation was no longer required. As a result she was transferred to the medical unit where the Registrar, Dr. Brathwaite, noted: "cerebral haemorrhage presumed infection; septic embolus there was never established the particular infection which Mrs. Lorde was suffering from but the evidence revealed that there was indeed some infection in her system". The antibiotic regime was continued and further blood culture tests carried out which proved sterile.

[121] We should pause here to reflect on and determine the issue of the administration of antibiotics and the sterile blood culture tests, the latter of which Mr. Forde submitted was indicative of the absence of infection in Mrs. Lorde on 21 January when she was admitted to Queen Elizabeth Hospital and consequently could not be the cause of her stroke. On Mrs. Lorde's second admission to Bayview Hospital on 9 January, which admission had been ordered by the appellant, the appellant ordered that blood cultures be done. He admitted that he did not order that they be done immediately. The upshot of this was that Mrs. Lorde on admission was immediately started on intravenous antibiotics (also on the appellant's order) which resulted in a masking of infection and the lack of identification of the organism/micro-organism in Mrs. Lorde and consequently the inability for the infection to be appropriately treated. The experts agreed that it is never appropriate to delay antibiotics in order to take a blood culture since administration of antibiotics is the primary action to stem infection. However as Dr. Bennett noted, it would be advisable in these circumstances, to take a swab even if the taking of a culture is not possible. It is to be noted that on admission to Queen Elizabeth Hospital, Mrs. Lorde's diagnosis was post partum pyrexia followed by hemiparesis and possible septic infarct. Mr. Forde submitted however that it was common ground that there were no confirmatory tests of infection and that particular consideration ought to have been given to that aspect of the case. It is indeed common ground that there was never established the particular infection which Mrs. Lorde was suffering from but the evidence revealed that there was unquestionably some infection in her system. The question must be asked: If, as the appellant suggests, there was no evidence of infection when Mrs. Lorde was admitted to Queen Elizabeth Hospital, why would it then be necessary for the immediate and continued administration of antibiotics, if not to quell infection?

[122] Dr. Gill in his 2005 report had stated that although there was a history of puerperal sepsis, it had been treated with antibiotics and there was no evidence of disseminated sepsis when Mrs. Lorde was admitted to the Queen Elizabeth Hospital. But Professor Nedd did not agree and pointed out that when Mrs. Lorde was admitted to Queen Elizabeth Hospital she had a coma, a major neurological event. He went on to explain that on investigation she had a high white blood cell and platelet count which are signs of sepsis. In addition she was tachypnoeic (breathing fast) and tachycardic (elevated heart rate) and she had an elevated temperature. He further explained:

> "So first evidence was that her vital signs indicated that there was an infectious process going on. Usually in a setting of sepsis, the first thing happens is your blood – because your blood volume actually drops significantly, your heart has to beat actually faster to pump blood through your system to keep you alive. So that was one process. Secondly, in order to keep your brain and the rest of your organs assisted, oxygen needs it, you have to breathe in faster, okay. So those point to the early signs of sepsis".

[123] Professor Nedd also stated that other lab studies done on the 21 or 22 January showed that her white blood cell count was elevated to 19,000 and that once there is an elevation in the blood count over 15,000 it usually means there is sepsis or an abscess present. He emphasized that the overwhelming evidence that sepsis was present was the fact that her platelet count was almost a million, which is usually the case in early sepsis. He said:

> "In summary, the blood count, the white cell count and actually the third part of this is that with antibiotics there was effective treatment in that the white cell count corrected. It went from a normal white cell count to a corrected white cell count, from 19,800 to 9,000 and it normalized by the 25. So that to me was evidence of sepsis. … the norm is usually less than 500 thousand. The platelet count decreased from 995 down to 754 indicative of some process of response to the antibiotics. So again, clearly those point to a process of sepsis, sepsis being a bacterial infection present in the bloodstream".

[124] Professor Nedd also noted that:

> "antibiotics only work for bacterial infection and given that the antibiotics therapy was the only form of intervention at this time it was clear to see that she must have had a bacterial infection that responded to antibiotics".

[125] It is our judgment that we must proceed on the footing that Professor Nedd as a professor in neurology was competent as an expert to

give the evidence which he did give on all the essential matters relating to the presence of infection in Mrs. Lorde. We are of the opinion that his evidence was more compelling and rational than that of Dr. Gill.

[126] With regard to the blood culture tests proving sterile, it was accepted by the experts that conducting a blood culture test after administration of antibiotics serves to prevent proper diagnosis of possible infection since antibiotics are administered for the purpose of curing infection. Dr. Marquez had noted in his report that it is possible for there to be negative septic screen when a patient has been on antibiotics before the septic screens are even due even though there is bacteria in the blood. "So you have to take it in the clinical context whether the patient was actually given antibiotics or not". We accept the medical reality that the intravenous administration of antibiotics permits the blood to move quickly and readily absorb the drug with the consequence that the full septic workout would have produced a sterile result. We also accept the judge's finding that there was infection when Mrs. Lorde was admitted to the Queen Elizabeth Hospital, which had been the result of inadequate treatment by the appellant while Mrs. Lorde was in his specialist care.

[127] As one expert put it and a view which we accept: Mrs. Lorde's postoperative illness was a continuum from pelvic infection which was associated with inappropriate prophylaxis, associated with septicaemia for which she did not receive an appropriate length of treatment with intravenous antibiotics, culminating in a cerebral lesion which caused a stroke.

[128] It is our opinion that the clue to the judge's reasoning lies in her use of the phrase "on the balance of probabilities." It reflects the fact that the conflict was not strictly between conflicting opinions of the experts but between conflicting opinions of the experts **specifically** in relation to the central issue of whether the stroke was due to the pelvic sepsis which spread to the brain.

[129] While regard must be had to the fact that the issue of the likeliest cause of Mrs. Lorde's embolism fell outside the area of expertise of some of the experts, in which case they issued a disclaimer, each expert gave a valuable opinion on the issue which was ultimately for the judge to determine.

[130] Of the eight experts, seven of them concluded on the balance of probabilities that Mrs. Lorde's embolism had a septic origin, notwithstanding that no specific source of infection was ever identified. Of the seven, six of them, Professor Nedd, Dr. Ishmael, Professor Walrond, Dr. Marquez, Dr. Bennett and Dr. Geddes concluded that the septic origin was likely to be in the pelvic region. Dr. Jarvis was of the opinion that the origin was likely to be a chest infection. Only Dr. Gill was of the opinion that the embolism did not have a septic origin and was as a result of Mrs. Lorde being a prime candidate for pregnancy related stroke. It must be remembered that this opinion was contrary to his first opinion which had however been similar to the other seven experts.

[131] Professors Walrond and Nedd were very expansive in their explanations of the relevant medical terms, of the nature of the injury and of the cause of the stroke, which explanations significantly assisted the judge and this Court in adequately comprehending the circumstances.

[132] Professor Walrond's views were formed from notes from the Bayview and Queen Elizabeth Hospitals, Dr. Gill's 1999 report, a report dated April 1999 from Professor Nedd and reports from Dr. Evelyn, consultant physician at the Queen Elizabeth Hospital. He was of the opinion that Mrs. Lorde most likely had a pelvic sepsis which led to bacteremia and an endocarditis with subsequent embolisation of an infected thrombus to the brain. His conclusion had been reached by the record of a pattern of continuing high fever and temperature swings and the fact that Mrs. Lorde had been discharged from the Bayview Hospital with inadequately treated sepsis on two occasions. He asserted that the symptomatology of the patient and the fact that she had had an emergency caesarian without prophylactic antibiotics indicated that there was a pelvic infection. Added to that was the sepsis not settling and her history of being at home for ten days with high fever and chills, and the fact that there was leukocytosis – high white cell count.

[133] Professor Walrond indicated that infection can reach the brain in a number of different ways. "If you have a bacteremia or a septicaemia, it could reach it differently, because the bacteria are circulating in the blood and it could just get there all right. The other ways in which it can reach is through the embolus of an infected thrombus or an infected endocardial granulation …Now there are two reasons for considering the latter possibility. One is that because of the way that the circulation is configured, for an infected thrombus to reach the brain, it would either have had to bypass the pulmonary circulation or it would have come from the heart itself, and from the valve leaking. This is what we are accustomed to in endocarditis".

[134] Professor Walrond also noted that the reason for considering that possibility (endocarditis) is that the CT scan suggested that there was not only infection, but there was an infarction, and an infarction would come about because of a thrombus. A thrombus may occur spontaneously in the brain – it is normally seen in people, who have strokes, but it could also come from embolus and if it comes from an embolus the most common site would be from an endocarditis.

[135] In reaching the conclusion regarding endocarditis, Professor Walrond had also relied on the notes from the Queen Elizabeth Hospital where it had been recorded: "The patient's course suggests the development of sepsis and a cerebral infarct (sepsis). The development of a new murmur raises the possibility of infective endocarditis which is well known to cause embolic phenomena". He had also had sight of Dr. Gill's 1999 report which before the volte-face in the 2005 report had given the opinion that the septic endocardial embolus which arose was a consequence of bacterial endocarditis. Professor Walrond indicated at trial that in coming to the conclusion regarding endocarditis he had not at the time been privy to Dr. Ishmael's report which refuted the presence of bacterial endocarditis. It would therefore not be unreasonable for Professor Walrond to have concluded as he did.

[136] Professor Walrond admitted under cross-examination that while neither neurology nor gynaecology was his specialty he had had practical experience over the years in both specialties.

[137] Despite Mr. Forde's observation that the chain of causation as propounded by Professor Walrond (pelvic infection - endocarditis-stroke) was flawed, Professor Walrond's explanation, opinion and conclusion that the infection was pelvic in origin and through the negligence of the appellant it spread through the blood and was the cause of Mrs. Lorde's stroke was deemed conclusive. Professor Walrond in other

words was of the view that if the pelvic infection had, when detected, been appropriately treated, it would not have reached the stage of bacteremia and septicaemia and the stroke would have been avoided. This was the conclusion to which the judge had come and a determination which we consider unassailable.

[138] Professor Nedd in his turn provided a very detailed and analytical assessment of the pathophysiological mechanism of how the stroke occurred. His evidence supports the finding that Mrs. Lorde suffered an embolic stroke associated with an infectious process. He based that finding on three factors: (a) the patchy areas of haemorrhages revealed on the CT scan of 21 and 22 January; (b) the early presentation of a seizure; and, (c) the highly elevated white blood cell and platelet count. Even under cross-examination, he maintained that "the prevailing evidence indicated that there was an infectious process leading to the final result of a cerebral vascular accident of septic origin".

[139] While acknowledging that there had been no confirmatory test of infection, he concluded that the reason was because there was not an identified bacteria and the situation had been only partially treated through the administration of antibiotics prior to a septic work up being undertaken.

[140] In response to Dr. Marquez' opinion that the true cause of Mrs. Lorde's stroke was unknown, Professor Nedd stated:

> "Sometimes we use treatment as confirmatory of the presence of a disease process if it responds to treatment. So in this case, since you didn't have bacteria identified because of a partially treated situation, you now have confirmation based on evidence of treatment".

He continued:

> "Antibiotics only work for bacterial infection. It does not work for viruses; it does not work for fungal infections and so forth. So clearly there was a bacterial infection present in her that responded to antibiotics".

[141] He explained that Mrs. Lorde having left the Bayview Hospital on both occasions without the infection having been completely resolved and the appropriate diagnostic studies performed, pointed toward a septic crisis – a point also noted by Professor Walrond. He stated that there is "a cascade of events" that occurs once there is sepsis in the blood and that cascade of events more likely than not would lead to a stroke and would lead to a haemorrhagic infarction.

[142] When asked what actually caused Mrs. Lorde's stroke, he responded:

> "When you look at the path or the process that was described in all of the medical documents available I concluded by saying it is clear that, one, Mrs. Lorde had a septic condition. It is clear that the CAT scan, the initial CAT scans performed here in Barbados evidenced a process that more than likely, more likely than not it confirmed an embolic process with septic emboli. The fact that there were in fact areas of patchy haemorrhagic infarction throughout actually increases that likelihood. Now the issue of a seizure, early presentation of a seizure again points to an issue of liability … was that whatever we do see early seizure after a stroke – in stroke seizures are not very common … so when we see a seizure early on in a stroke, there is usually something like an infectious process and that creates the condition in the cerebral tissue that creates increased electrical activity that results in a seizure. So obviously those factors, when we actually evaluated Mrs. Lorde's case, clearly points us in a direction of some infectious process going on in the brain."

[143] Dr. Ishmael in his report stated that while Mrs. Lorde did have some symptoms and signs of bacterial endocarditis, these symptoms and signs are also associated with pelvic sepsis. He came to the conclusion that the source of the abscess in the left parietal lobe of the brain was metastic spread from the infection in the pelvic region following the caesarian section as there was no evidence that Mrs. Lorde had bacterial endocarditis.

[144] In the case of Professor Geddes, although he was of the opinion that Mrs. Lorde had a cerebral abscess his indication of the path of the infection was due to the passage of bacteria from the infected pelvis through the blood and into the brain.

[145] Dr. Bennett was also of the view that early indications of developing sepsis having been missed by the appellant resulted in the infection progressing and spreading and causing the subsequent complications and sequence. She based her belief that Mrs. Lorde had a cerebral abscess on the history of the elevated pulse and swinging temperatures and the likely course the infection would have taken, namely from the pelvis into the bloodstream and into the brain.

[146] Despite his secondary conclusion that the cause of Mrs. Lorde's stroke was unknown, Dr. Marquez "stood by" his primary conclusion that the likeliest cause was related to underlying sepsis which was likely to be pelvic in origin. He like the other experts spoke to her unresolved infection and indicated that it had:

> "spread via the blood stream to the brain. The bacteria get impacted into one of the blood vessels, likely the more proximal branch of the left middle cerebral artery in this case and set up a thrombotic process, which causes thrombosis and blockage of a more proximal vessel of the left middle cerebral artery. This occlusion causes ischemia (decreased blood flow) and eventual infarction (cell death) of the brain, specifically in the left parietal lobe in this instance. This large area of

ischemia can sometimes undergo haemorrhagic transformation (bleeding within the area of dead tissue) as has occurred in this particular case".

In the report he further said:

"In my opinion on the balance of probabilities I would state that Mrs. Lorde had a pelvic infection resulting in septicemia which subsequently led to bacteria being spread through the blood and being lodged in one of the proximal vessels of the left middle cerebral artery and causing thrombosis and blockage of this blood vessel. This resulted in cerebral (brain) infarction with subsequent haemorrhagic transformation of this infarction in the left parietal lobe. This injury resulted in severe cerebral edema (brain swelling) with marked mass effect".

[147] From this review of the experts' testimony there was revealed persuasive and compelling evidence to support the judge's finding that on a balance of probabilities it was the fault of the negligent treatment by the appellant which was the cause of Mrs. Lorde's pelvic infection and which was the cause of or materially contributed to her stroke. Once the judge accepted the evidence leading to that conclusion, this Court cannot say that that finding was wrong. Legal authorities indicate that if on the balance of probabilities competent treatment would have prevented the deterioration which occurred, the negligence is causally linked to the damage and the appellant is judged liable. That was what was required of Mrs. Lorde to prove and that was what in our opinion was done.

[148] Mrs. Lorde's case was based upon whether there was the exercise of proper care and if that proper care had been exercised in all respects and had continued to be exercised whether Mrs. Lorde would have suffered the stroke. There was in our opinion abundant evidence entitling the judge to determine that the appellant's neglect in providing the proper care required caused or materially contributed to the stroke which Mrs. Lorde suffered.

[149] The judge plainly determined that she was not bound to hold that the appellant could escape liability for his negligent treatment of Mrs. Lorde simply because he led evidence from a number of medical experts who were of the opinion that his treatment accorded with sound medical practices. The judge evidently acknowledged that there is seldom any one answer exclusive of all others to problems of professional medical judgment and that there will always exist differences of opinion and practice in the medical as in other professions.

[150] She also recognised that there was a direct conflict of expert evidence which had to be resolved, that she could legitimately prefer the evidence of one expert to that of the other on the ground that one or the other expert's opinion was not capable of withstanding the logical analysis which the court could determine was reasonable or responsible.

Disposal

[151] The appeal must therefore be dismissed. The respondents shall have their costs both in this Court and in the Court below.