DETERMINATION BY SHERIFF K A ROSS INTO THE CIRCUMSTANCES OF THE DEATH OF HAMISH ADAMSON v.

SHERIFFDOM OF SOUTH STRATHCLYDE, DUMFRIES AND GALLOWAY AT DUMFRIES

DETERMINATION

by

SHERIFF KENNETH A ROSS

Sheriff of South Strathclyde, Dumfries and Galloway at Dumfries

in

an Inquiry into the circumstances of the death of

HAMISH ADAMSON

held under

the Fatal Accidents and Sudden Deaths Inquiry (Scotland) Act 1976

DUMFRIES: 19 December 2000

This Inquiry was held into the circumstances of the death of Hamish Adamson whose death was certified on the day of his delivery at Cresswell Maternity Hospital, Dumfries on 18 September 1998. In terms of Section 6 of the Fatal Accidents and Sudden Deaths Inquiry (Scotland) Act 1976 I make the following findings:

- **Place and time of death**

  Hamish Adamson died at Cresswell Maternity Hospital, Dumfries at 06.10 on 18 September 1998.

- **Cause of death**

  Hamish's death was caused by hypoxic ischaemic encephalopathy as a result of uterine hyperstimulation brought about by the application of prostaglandin gel to his mother Mrs. Caroline Adamson during her induction of labour.

- **Reasonable precautions whereby Hamish's death might have been avoided**
- The start of Mrs. Adamson's induction soon after her admission to Cresswell on the morning of 17 September.
- A decision at 15.10 to delay the start of Mrs. Adamson's induction until the following day.

- A decision at 21.25 not to proceed with the administration of the second dose of prostaglandin gel to Mrs. Adamson.
- Continuation of Cardiotocographic (CTG) monitoring of Mrs. Adamson at 22.20 on 17 September.
- Earlier diagnosis of Mrs. Adamson's labour after 23.40 on 18 September.
- Re-institution of CTG monitoring of Mrs. Adamson between 23.40 and 00.45 on 18 September while she was being cared for in Unit C and before her transfer to the labour ward.
- Earlier transfer of Mrs. Adamson from Unit C to the labour ward after labour was finally diagnosed at 00.20 on 18 September.
- Commencing the caesarean section operation on Mrs. Adamson and delivering Hamish before 01.30 on 18 September.
- **Defects in the system of working which contributed to Hamish's death**
- Failure at Cresswell to have a proper and clearly understood policy for the induction of labour by prostaglandin gel in respect of
- Time of commencement
- Monitoring of the foetus and the mother during induction
- Failure at Cresswell to have a proper and clearly understood policy on preparations for emergency caesarean section operations required in the course of labour in respect of
- The circumstances in which the need for such emergency operations is categorised as "immediate".
- A realistic time for completion of such operations from the decision to operate until delivery.
- The need for one member of the operative team to assume responsibility for co-ordinating and monitoring such preparations.
- Failure to have sufficient midwifery staff on duty to cope adequately with the workload at Cresswell on 17 and 18 September.
- **Other relevant facts**
- The dedicated 3333 telephone line for use in emergencies is not always used by staff at Cresswell when requesting the attendance of, for example, anaesthetic staff.
- Not all relevant records of telephone communications from and between hospitals of Dumfries and Galloway Acute and Maternity Hospital Trusts are retained.
- The "team" system of midwifery care at Cresswell did not ensure that Mrs. Adamson received continuity of carer during her stay in Cresswell.
- There are no clearly understood arrangements at Cresswell for obtaining cover if midwifery staff are unexpectedly unable to attend for duty.
- The procedures at Cresswell for informing staff of changes to any Guidelines or in the practice to be followed are informal and unsatisfactory.
- The procedure for dealing with patient concerns after or during treatment prevents further direct contact with the patient once it is known that legal advice is being sought by the patient.
- The procedure for dealing with patient concerns after or during treatment does not conclude with specific advice on how to access the formal hospital complaints procedure.
- There was no proper or adequate inquiry by the Trust into all the circumstances of Hamish's death nor any proper or adequate review of the circumstances which preceded his death.

- There appears to be confusion about the meaning of aspects of "Guidelines on Induction of Labour" issued by the Royal College of Obstetricians and Gynaecologists in 1998
- **Recommendations**
- The management of the Trust and the senior medical and midwifery management at Cresswell should carry out an urgent and thorough review of the practices and procedures at Cresswell in relation to a trial of labour by induction by prostaglandin gel by a woman who has previously undergone a caesarean section operation with particular reference to
- The time of commencement of such inductions, and the need for the informed consent of the mother, if labour is likely to commence outwith the daytime working hours of the Hospital
- The continuation of such induction procedures by a further application of gel, and the need for the informed consent of the mother, if labour is likely to commence outwith the daytime working hours of the Hospital
- Consultation, both before the induction commences and before any necessary second application of gel, with medical staff and whoever is responsible on the day of the induction for midwifery staffing at Cresswell, that a midwife will, if required, be immediately available to devote her whole time to such a woman after the commencement of the induction and certainly after the second application of gel
- The offer and provision of CTG monitoring during all stages of such an induction if that is what the mother wishes
- The immediate transfer to the labour ward of any such mothers who establish in labour
- The provision of an individual plan for labour for each such woman whose labour is to be induced to be attached to the case notes and to identify clearly any features of her past obstetric history, but including particularly a previous caesarean section and that the induction is a trial of labour. Such a plan should identify parts of any hospital guideline to which those caring for the mother should pay particular attention
- The obtaining of a copy of any medical records from the hospital in which any previous caesarean section operation was carried out
- The management of the Trust and the senior medical and midwifery management at Cresswell should carry out an urgent and thorough review of the practices and procedures at Cresswell in relation to caesarean section operations which are necessary during labour with particular reference to
- Making clear by appropriate categorisation those where there is an immediate risk to the health or life of the mother or the well-being of the foetus
- Establishing a reasonable and attainable time for the completion of any task of preparation for such operations
- Designating a member of the operative team to be responsible, from the time of decision to operate until the commencement of the operation, for co-ordinating and monitoring such preparations
- Setting a target time or standard for the completion of such operations from the time of decision by the obstetrician until the delivery of the child
- Regularly monitoring and reviewing any such target time or standard to ensure that it remains practicable and is either maintained or improved
- The management of the Trust and the senior medical and midwifery management at Cresswell should carry out an urgent and thorough review of the

arrangements for cover for midwifery staff unable to attend for work and put in place clearly understood arrangements for the call out of such cover staff

- Following the conclusion of such reviews the management of the Trust and the senior medical and midwifery management at Cresswell should
  - Produce revised guidelines for medical and midwifery staff based on their conclusions
  - Set in place a system of providing each member of staff with a copy of such guidelines and to confirm receipt of them by staff members
  - Set in place a system for ensuring that staff members receive and acknowledge any alterations to such guidelines
- Unless engaged the 3333 telephone line should always be used in any emergency
- Any manuscript or other records of telephone calls made to and from the Trust switchboard should be retained for a reasonable period
- The management of the Trust and the senior medical and midwifery management at Cresswell should carry out an urgent and thorough review of the operation of the "team" midwifery system at Cresswell to conclude if it regularly meets its intention of providing continuity of care throughout a pregnancy
- The management of the Trust and the senior medical and midwifery management at Cresswell should set in place a system whereby any informal course of communication or correspondence with a patient expressing dissatisfaction with the service provided by the Trust or its employees concludes with specific information about the formal Trust complaints procedure and how to access it
- The management of the Trust and their legal advisers should look again at any policy which prevents direct communication between the Trust and any patient expressing dissatisfaction whether or not the patient has taken legal advice or is contemplating legal action against the Trust
- The management of the Trust and the senior medical and midwifery management at Cresswell should set in place a system whereby any neo-natal death is reviewed by a member of the medical or midwifery staff and a written report or note of their conclusions is retained
- The Royal College of Obstetricians and Gynaecologists should clarify, if necessary by the listing of further examples, the meaning of the terms "special care", "high risk" and "risk factors" in Paragraph 5 of "Guidelines on Induction of Labour" issued in 1998. The College should move speedily to issue the further guidelines, referred to in Paragraph 5, on the management of labour in cases when induction of labour is undertaken in a woman with a previous caesarean section, especially if the cervix is unfavourable and prostaglandin is used

Sheriff of South Strathclyde Dumfries and Galloway

NOTE:

Introduction

- The Inquiry was at the instance of the Procurator Fiscal, Dumfries in terms of section 1(1)(b) of the 1976 Act. He was represented by his Principal Depute, Mr. Martin. Hamish's parents, Mrs. Caroline Adamson and Mr. Nicholl Adamson, were represented by Mrs. Davie, Advocate. Dr. George Gordon, one of the

consultant obstetricians concerned in the ante-natal care of Hamish and Mrs. Adamson, was represented by Mr. Holmes, Solicitor; as was Dr. Susan Livingstone, the anaesthetist present during the caesarean section operation which resulted in Hamish's delivery. Dumfries and Galloway Acute and Maternity Hospitals Trust, which has responsibility for Cresswell Maternity Hospital and which employs the nurses, midwives and doctors who work there, and who were concerned in the care of Mrs. Adamson and Hamish, was represented by Miss Robertson, Solicitor.

- The Inquiry extended over eighteen days of evidence and four days of submissions commencing in March and concluding in November 2000. Twenty nine witnesses gave evidence. They are listed in Appendix 1. It is a matter of regret that the proceedings took so long. That was an unfortunate consequence of an under-estimation of the likely length of the Inquiry by those who initiated it (understandable in many ways in light of the evidence which I heard), and the diary and other commitments of those involved, whether as witnesses or others; and to some extent the recent difficulties relating to shrieval resources.
- The evidence which I heard revealed numerous inconsistencies between witnesses and gave rise to several areas of disputed fact. I will, first of all, give a general factual narrative which reflects the chronology of events from the discovery of Mrs. Adamson's pregnancy until Hamish's delivery and death. It is based on what really was not the subject of dispute or conflicting evidence. I will then examine, at greater length and against the background of the evidence, those areas of importance where witnesses differed or where it is difficult to form a clear or firm factual picture. Inevitably some of these will run into each other or overlap but there were various distinct areas which were the subject of separate lines of questioning during the evidence and which were focused in the submissions I heard. The scope of the Inquiry was wide ranging. Issues were covered which, in the end of the day, could not be said to be directly relevant to Hamish's death. In effect, the evidence explained them. I have not dealt with these. There were some issues where the relationship with Hamish's death was explored at some length but I have not concluded that what was done or not done might have avoided the death. In fairness to those involved I deal with these. Because of the prolonged period of the Inquiry the Notes of Evidence were extended. Where appropriate I refer to these. The references are to be found in Appendix 2. Finally I will deal in greater detail with my Findings in terms of Sections 6(1)(c),(d) and (e) of the 1976 Act.

Factual Background

- Mr. and Mrs. Adamson were living in Sanquhar when Mrs. Adamson became pregnant with Hamish. They already had a son, Jamie, born in Portsmouth on 14 November 1994. The evidence of Mr. and Mrs. Adamson, and this was confirmed by the Portsmouth medical notes, was that her pregnancy with Jamie was uneventful. Jamie's birth, however, was not. His delivery was by emergency caesarean section as a result of foetal distress and failure to progress.
- Mrs. Adamson first attended for medical assistance in relation to her pregnancy with Hamish shortly after 31 December 1997 when she had learned of her pregnancy through a home pregnancy test kit. She saw her general practitioner, Dr. Baker. Soon after this she saw Margaret Culver the Health Visitor attached to the Sanquhar practice, and a qualified midwife. (Mrs. Adamson's Health

Visitor care was subsequently taken over by Eleanor Brodie who first saw her on 12 April 1998 and continued to see her until her admission to Cresswell and also after she returned home.) Margaret Culver, on the basis of Mrs. Adamson's information about her last period, calculated her estimated date of delivery as 4 September.

- Mrs. Adamson first met her consultant obstetrician, Dr. Paul Mensah, on a visit to the ante-natal clinic at Sanquhar on 12 March 1998. This was a routine visit in early pregnancy. He discussed her previous caesarean section with her and explained there was no reason why she should not deliver vaginally in her current pregnancy. He indicated that 60 to 70 percent of women did so. He said that she would be given a trial of vaginal delivery. His note confirms that where he noted "Keen for trial of vaginal delivery". That was commented on by another Doctor from Cresswell, Dr. Grieve, who saw Mrs. Adamson at a further clinic visit in Sanquhar on 23 July 1998.
- In the course of her visits to the Sanquhar clinics the date of Mrs. Adamson's expected delivery had been adjusted to 7 September. By 8 September she had not gone into labour and attended at the Sanquhar clinic where she saw Eleanor Brodie. She was anxious about going beyond her term and told Eleanor Brodie that. Normal practice is to allow mothers to go for seven days beyond the expected date of delivery and then refer them to an obstetrician for consultation. Because of Mrs. Adamson's anxiety Eleanor Brodie referred her immediately and arranged for her to attend at the Cresswell clinic the following day, 9 September.
- Mrs. Adamson attended at the Cresswell clinic on 9 September accompanied by her husband. A remark about her size by the midwife whom she saw, meant in fun, caused her to burst into tears. She was asked if she wanted to see a consultant and saw Dr. George Gordon, then the senior Consultant Obstetrician at Cresswell and the Medical Director for Cresswell. She expressed concern to Dr. Gordon about her previous caesarean section, the fact that the placenta had been noted as old and the small size of her pelvis. Dr. Gordon carried out a scan and reassured her that the placenta seemed to be normal. There was discussion between Dr. Gordon and Mr. and Mrs. Adamson about her delivery. As a result of that Dr. Gordon wrote to the Queen Alexandra Hospital in Portsmouth for the medical notes relating to her previous pregnancy and the birth of Jamie. It was arranged that Dr. Mensah would see Mrs. Adamson at his clinic one week later.
- Mrs. Adamson attended at the Cresswell clinic on 15 September again accompanied by her husband. They saw Dr. Mensah. He had the medical notes from Portsmouth. He explained the reason for the need for the emergency caesarean section in 1994. Mrs. Adamson expressed concern about the size of her pelvis and requested a pelvic scan. Dr. Mensah indicated that this procedure was no longer regarded as useful and was not followed at Cresswell. Mrs. Adamson was anxious about the mode of delivery and Dr. Mensah was aware of this. There followed a discussion about the mode of Mrs. Adamson's delivery as a result of which it was agreed that Mrs. Adamson would be admitted to Cresswell on 17 September for a trial of labour by induction.
- Mr. and Mrs. Adamson returned to Cresswell on 17 September at about 8.30. Mrs. Adamson was admitted to Unit C by midwife Janice Gourlay who took blood and urine samples and examined her. She was also examined by Dr. Clyde, the Senior House Officer on duty, at 9.45. At about 10.19 she was

connected to a cardiotocograph ("the CTG") to monitor foetal heartbeat and uterine activity. The tracing obtained was satisfactory and revealed no abnormal signs. The monitoring continued until shortly after 11.30 when the machine was disconnected. Shortly before 15.00 midwives Jacqueline Carroll and Margaret Anderson advised Mrs. Adamson that the medical staff had confirmed that the induction could proceed. No Doctor saw or examined Mrs. Adamson then. The question of commencing the induction was not discussed between any Doctor and Mr. and Mrs. Adamson. The CTG was reconnected at approximately 14.45. Mrs. Adamson was examined internally by Jacqueline Carroll at approximately 15.10. The Bishop Score which measures the state of the cervix and whether it requires stimulation by prostaglandin gel was 2. Immediately after the examination 1 mg of the prostaglandin gel used in the induction process was applied to her cervix. The CTG monitoring continued until 16.20. It had disclosed no foetal heart abnormality nor any uterine activity. At approximately 17.00 Mr. Adamson returned to Sanquhar. He was advised that it was unlikely that the baby would be born before the following morning but that he would be contacted by telephone if Mrs. Adamson went into labour.

- Jacqueline Carroll continued to monitor Mrs. Adamson intermittently for foetal heart rate and uterine activity until 20.50 when she recorded "mild irregular uterine activity". To do so she did not use the CTG but a hand held device known as a Doppler. For inductions using prostaglandin gel a second application of gel is normally given after six hours if labour has not commenced. As a preliminary to doing that Jacqueline Carroll recommenced CTG monitoring at 20.50. The readings were satisfactory. The monitoring was discontinued at 21.10. Mrs. Adamson went to the toilet. At 21.25 Jacqueline Carroll carried out an internal examination the result of which was a Bishop Score of 3. A second dose of 1mg of prostaglandin gel was applied and the CTG monitoring recommenced.
- At 21.45 Jacqueline Carroll went off duty and Mrs. Adamson's care was taken over by midwife Alison Rogerson. Mrs. Adamson told her that she had a headache and was given 1grm. of Paracetamol. At 22.20 the CTG monitoring was discontinued. No foetal heart abnormality had been noted. There was some uterine activity which Alison Rogerson noted as "onset of mild tightenings 1 in 2 1/2 -3 minutes". Mrs. Adamson was anxious and tense and was advised by Alison Rogerson to have a warm bath to relieve her discomfort and relax her. There was discussion about the use of a TENS machine (an electronic nerve stimulator), again to relieve discomfort, and the taking of Triclofos - a relaxant drug. Shortly after this, and before Mrs. Adamson went for her bath, Alison Rogerson left the ward to go to care for another patient in the labour ward. Responsibility for Mrs. Adamson's care was taken over by midwife Karen Hastings. Neither Alison Rogerson nor Karen Hastings advised Mrs. Adamson of this.
- Mrs. Adamson entered her bath at about 22.45. She left the bath at about 23.30. Mrs. Adamson had no contact with any midwife while she remained in her bath. About 15 minutes before she left the bath she felt "terrible pains". She was not sure if these were cramps as a result of the application of the prostaglandin (Jacqueline Carroll had warned her of this possible consequence) or labour contractions. The pains were such that she had difficulty drying herself. She was unable to lift the bath mat from the floor as a notice on the wall indicated should be done. Shortly after she left the bath (at about 23.40) Mrs. Adamson met

Karen Hastings who provided the TENS machine and, at 23.50, administered 5 mls. of Triclofos. She provided a chair for Mrs. Adamson to be more comfortable. Between 23.40 and 00.20 Karen Hastings monitored Mrs. Adamson intermittently by using the Doppler to listen to the foetal heart and by palpating her abdomen to assess her uterine activity or contractions. No signs of any abnormal foetal heart rate were detected or recorded. Mrs. Adamson explained her pain and discomfort to Karen Hastings who noted at 12 midnight "Not settling, contractions mild 1 in 2 feels that she can't settle, trying to get comfortable on bed, feels "sore" all the time, feels she can't cope."

- Because of her continuing pain Mrs. Adamson requested further analgesia at 00.15 on 18 September. Before providing this Karen Hastings carried out an internal examination at 00.20. She noted that Mrs. Adamson was "3-4 cms. dilated, head well applied". She concluded that Mrs. Adamson had established in labour and noted "For to the labour ward for analgesia". She telephoned Mr. Adamson and advised him that his wife was in labour. She was unable to take Mrs. Adamson to the labour ward as she was the midwife in charge of the ward where Mrs. Adamson was. She telephoned Sister Featherstone, the sister in charge of the labour ward. No one in the labour ward was then available to take Mrs. Adamson to the labour ward or care for her there. Karen Hastings then telephoned Unit D, another ward at Cresswell, and requested assistance. At 00.45 midwife Marcia Thomson took over Mrs. Adamson's care in the labour ward . No monitoring by CTG had been carried out between 22.20 and Mrs. Adamson's arrival in the labour ward at 00.45.
- In the labour ward, at approximately 00.45, Mrs. Adamson was connected to the CTG and monitoring commenced. This revealed an abnormal foetal heart beat which was noted by Marcia Thomson as "FH¯ 60 Foetal Bradycardia 90 120 moved position" at 00.50; and as " FH¯ 80 Foetal Bradycardia" at 00.55.
- Between these two times Marcia Thomson informed Dr. Clyde of her findings. She did not note this at the time in Crown Production No. 7 but added a note to that effect some months later when she consulted Crown Production No. 7 to prepare a written statement for Mrs. Brenda Thorpe, the Supervisor of Midwives at Cresswell.
- At approximately 00.55 Dr. Camille Nicholls, the obstetric Registrar on duty, was called. She was resident at Cresswell that night and attended at 01.00. She carried out an internal examination and noted "Prolonged Bradycardia baseline 90 with deceleration down to 60 bpm. Ve - 4cm dilated". She decided that Mrs. Adamson required an emergency caesarean operation. She telephoned Dr. Gordon, the duty Consultant, at his home at 01.03. They discussed the case for just over one minute and Dr. Gordon confirmed Dr. Nicholls' decision to carry out the operation.
- Before the operation could be carried out various personnel had to be brought together and various procedures carried out. Either just before or just after she telephoned Dr. Gordon Dr. Nicholls gave instructions to Dr. Clyde that the duty anaesthetist, the duty anaesthetic nurse and the duty paediatrician should be called; that Mrs. Adamson's consent to the operation should be obtained; that she should be prepared for the operating theatre; and that the theatre itself should be prepared.
- The duty anaesthetist that morning was Dr. Susan Livingstone. Her anaesthetic nurse was Susan Stones. Both had to cover Cresswell and Dumfries and Galloway Infirmary which is approximately one mile from Cresswell. Contact is

made with them by phoning the main hospital switchboard operator who then pages ("bleeps") or telephones both. Dr. Livingstone was paged in her bedroom at the Infirmary. She telephoned the switch board who put her call through to Cresswell. She spoke to Dr. Nicholls. She travelled to Cresswell and had completed her preparations ready for the operation by the time Mrs. Adamson arrived in the operating theatre. Susan Stones was telephoned at home. She travelled to Cresswell and was in the operating theatre before Mrs. Adamson arrived there.

- Sister Joan Featherstone was in charge of the labour ward. She learned just before 01.00 that Mrs. Adamson's operation was likely to take place. She was responsible for preparing the operating theatre. Before she could do so she required to hand over charge of the labour ward to another member of staff. She also took an incoming telephone call relating to another patient. She had completed her preparation of the theatre by about 01.30.
- Dr. Clyde's part in preparing for the operation was to obtain Mrs. Adamson's consent to it, to insert a drip, to inject her with Ranitidine and to check that bloods had been taken for a cross match. These he did in conjunction with Marcia Thomson. He then required to scrub up for the operation (this should normally be done for seven minutes).
- Marcia Thomson, in addition to assisting Dr. Clyde, prepared Mrs. Adamson for theatre by putting her gown on and supporting her generally while she was prepared and taken to the theatre. She had to fetch various drugs. She was also responsible for shaving Mrs. Adamson but this was not done until Mrs. Adamson was in the theatre.
- Dr. Jacqueline Bell was the paediatric Senior House Officer on duty. She was in the labour ward at about the time of the decision to operate on Mrs. Adamson. She was contacted and arrived at the operating theatre some time after 01.15. She formed the impression that the bradycardia from which Hamish was suffering was a recovering bradycardia and not a prolonged bradycardia. She did not, before the operation, read the note added by Dr. Nicholls to Crown Production No. 7. At 01.36 Dr. Bell telephone Dr. Marietta Higgs the consultant paediatrician on duty who also covered the Infirmary. Because of Dr. Bell's impression of the nature of Hamish's bradycardia Dr. Higgs did not feel she required to attend then unless Dr. Bell had felt it necessary but asked to be kept informed after the birth.
- At approximately 01.30 CTG monitoring was discontinued. Immediately before it was discontinued it showed a foetal heart rate of 90. Hamish was then alive. Mrs. Adamson was taken from the labour ward to the operating theatre. She had arrived there before 01.35. The anaesthetic procedures commenced at approximately 01.35. Mrs. Adamson was asleep and ready for the operation by 01.40. Mrs. Adamson had been catheterised and draped ready for the operation by shortly after 01.42. At that time no foetal heart rate could be detected. The operation to deliver Hamish by caesarean section commenced immediately thereafter. The operation took approximately two to three minutes. Hamish was delivered at 01.46.
- On his delivery Hamish was floppy. He was taken immediately to the resusitaire and to the care of Dr. Bell. (The resusitaire is a machine used to care for babies immediately after birth. It has a clock which should be started when a baby is born and which shows the time which has elapsed since birth.) Hamish had no heart beat and was unable to breathe. Dr. Bell attempted resuscitation by

means of bag and mask. This proved unsuccessful. She was then assisted by Dr. Livingstone who intubated Hamish by inserting a tube directly into his lungs. This too proved unsuccessful. Dr. Higgs arrived. When she did the clock on the resusitaire showed three minutes. She re-intubated Hamish. Heart massage was also applied. She injected him with sodium bicarbonate and with adrenaline. At 15 minutes on the resusitaire clock a heartbeat was detected. Hamish was taken to the Special Care Baby Unit where he was placed in an incubator and attached to a mechanical ventilator and a cardiac monitor. Attempts to support Hamish continued. He remained unable to breathe without mechanical ventilation. At about 05.45 Hamish was transferred down to the labour ward to be with his parents. He continued to be supported by hand ventilation. After discussion with Dr. Higgs Mr. and Mrs. Adamson agreed that further efforts to revive and support him should cease. Dr. Higgs left Hamish with his parents. When she returned hand ventilation had ceased and Hamish was dead.

- Hamish was certified as dead by Dr. Higgs at 06.10. She completed the Medical Certificate of Cause of Death. The cause of death was stated as "hypoxic ischaemic encephalopathy". A post-mortem of Hamish was carried out by Dr. Awni Lutfy on 21 September. He prepared a Report. This summarised his findings as "Pulmonary collapse with aspiration of meconium. Perinatal Hypoxia. Cerebral Hypoxia. Bilateral pleural effusion. Perinatal effusion. Adrenal haemorrhage. Slight pericardial haemorrhage (attributable to resuscitation attempts)". It disclosed no abnormality in Hamish which could have caused or contributed to his death.
- Mrs. Adamson returned home to Sanquhar on 19 September. She subsequently spoke about Hamish's death to her GP, Dr. Baker and her Health Visitor, Eleanor Brodie. Margaret Anderson, one of the midwives who had been involved in her care at Cresswell, visited her and brought some photographs of Hamish taken after his delivery. Mrs. Adamson expressed some concern to Margaret Anderson about the circumstances of Hamish's death. She received an appointment to see Dr. Mensah at an out-patient clinic in Sanquhar. She did not attend because she wished Dr. Higgs to be present at any discussion of the circumstances of Hamish's death. Dr. Higgs was not available that day. On 25 October Mr. and Mrs. Adamson met Drs. Mensah and Higgs at Sanquhar. Mr. and Mrs. Adamson took a hand-written list of questions to the meeting. The meeting lasted for two and a half hours. Following the meeting Dr. Mensah wrote to Mrs. Brenda Thorpe, the Midwifery Services Manager with the Trust . On 20 November Dr. Mensah wrote to Mr. and Mrs. Adamson . He offered them a further opportunity to discuss that letter and any other issues at a meeting following his clinic in Sanquhar at 16.00 on 26 November. That clinic finished early. Dr. Mensah contacted Mrs. Adamson and the meeting was brought forward. Mr. Adamson also attended. Dr. Mensah learned of Mrs. Adamson's intention to take legal action against the Trust. There was no further direct communication between Mrs. Adamson and the Trust.
- There is no formal structure or protocol at Cresswell to review or investigate the circumstances surrounding any particular neo-natal death. As part of a programme of on-going education of staff there are meetings held on Wednesdays to discuss any practice issues in Cresswell. These are attended by the medical, nursing and midwifery staff at Cresswell. Attendance depends, to some extent, on the other commitments of the staff concerned, holidays and

days off. Every two months time is set aside to review any peri-natal deaths and the management of such cases and whether there need to be any changes in practice. At these meetings the paediatricians are sometimes present. If it is the intention to review any practice guidelines for Cresswell that intention is advertised on notice boards within the hospital and circulated to other parties who might have an interest such as paediatricians, anaesthetists and the hospital's post-graduate education department. Hamish's death was discussed at such a Wednesday meeting. No record of the meeting or any conclusion reached was kept.

- Certain specific inquiries were made by various members of the Trust staff following Hamish's death. Dr. Mensah wrote to Mrs. Thorpe. Mrs. Thorpe spoke to midwifery staff and some submitted written comments. Dr. Mensah said that he too spoke to staff. Mrs. Thorpe presented her findings to Dr. Geals, who had taken over as Medical Director at Cresswell on the retiral of Dr. Gordon at the end of September 1998. Dr. Gordon made some inquiry of Dr. Brewster, the Medical Director of anaesthetics, about the circumstances in which Dr. Livingstone was called to Cresswell. Dr. Geals and Mrs. Thorpe made a presentation of their findings to Dr. McCormick, the Medical Director for the Trust, and Gordon Jamieson the Director of Quality Assurance. Mr. Jamieson deals with any formal complaints to the Trust. No written report of the result of these inquiries or the presentation to Dr. McCormick and Mr. Jamieson appears to have been retained. None was produced at the Inquiry.

Areas of Disputed Fact

The cause of Hamish's death

- The medical certificate of cause of death shows the cause of Hamish's death as "Hypoxic ischaemic encephalopathy". This was completed by Dr. Higgs very shortly after she confirmed he was dead at 06.10 following hand ventilation ceasing. In the Petition which initiated the Inquiry that is also what is averred. The most straightforward description of this term which was given in evidence was by Dr. Keiling as "an elaborate term for the effects on a baby's brain of the lack of oxygen". All the parties represented at the Inquiry were agreed with this cause of death. There was a difference, however, as to whether I could go further in my findings to specify the cause of the hypoxia which lead to the death. Mrs. Davie submitted that I should hold that the cause of death was hypoxic ischaemic encephalopathy or cerebral hypoxia, bilateral pleural effusion, peritoneal effusion and adrenal haemorrhage as a result of prostaglandin induced uterine hyperstimulation. Mr. Martin asked me to accept the opinion of Professor Robson that the likely cause of the hypoxia was uterine hyperstimulation. Mr. Holmes and Miss Robertson submitted that there were two possible causes spoken to in evidence, uterine hyperstimulation and obstruction of the umbilical cord. Although both accepted that Hamish had, in some way, been starved of oxygen in his mother's womb it was submitted that it could not be said, on the balance of probabilities, what had caused this.
- The starting point for any discussion of the cause of Hamish's death has to be the uncontested evidence that there was no congenital or other abnormality which was incompatible with his postnatal survival. The hypoxia was the cause of his death. At 22.30 all the indications were that he was a strong healthy

foetus. Likewise all the witnesses agreed that he was alive at 01.20 when a foetal heart beat was detected. It seems he might well have survived if delivered at 01.30. So it is established on the balance of probabilities that something occurred, certainly between 22.30 and just before the caesarean delivery (no heartbeat was detected at 01.42) which caused the hypoxia. Three possibilities were canvassed in evidence. In his Report Professor Robson had excluded uterine scar rupture. This was on the basis of what had been observed by Dr. Nicholls when she carried out the operation. That is a possible cause of severe hypoxia in women undergoing induction of labour after a previous caesarean section, as Mrs. Adamson was. His conclusion in his report was: "It is therefore most likely that uterine contractions were the cause of the hypoxia". This conclusion was supported in a Report by Dr. Gordon Lang, a retired Consultant Obstetrician with a special interest in perinatology. He did not give evidence but his conclusion was put to Professor Robson who agreed with it. Dr. Keiling did not exclude it as a possibility. But before dealing with that and the evidence which either supports or detracts from it, it is perhaps convenient to look at the third possible cause which was considered by Dr. Keiling.

- At paragraph 14 of her Report Dr. Keiling dealt with a possibility put to her in a letter from Mr. Martin that the hypoxia leading to Hamish's death could have been caused by a compression of the umbilical cord when Mrs. Adamson was having severe contractions. She expanded on that in her evidence pointing out that the cord was found to be round Hamish's neck when he was delivered. But her language does not suggest that this is any more of a possibility than uterine hyperstimulation. She expresses both as possibilities. Professor Robson was asked about this possibility. He considered it unlikely although he was not prepared to exclude it as a contributing factor. He bases that view on the CTG trace. Both these opinions are necessarily expressed in hindsight. Dr. Nicholls, on the other hand, was present at the birth and saw the cord. Indeed it was her note which seems to have alerted Dr. Keiling to the possibility. She was asked about that and the possibility that Hamish had suffered because the cord was round his neck. She said that it was loose and discounted the possibility of any such suffering. There is no doubt that Dr. Keiling was an impressive witness as was Professor Robson. But I take account of the measured way in which she approached both the active possibilities under discussion. That, balanced against the opinion of Professor Robson and the observations of Dr. Nicholls, leads me to conclude that it was unlikely that the hypoxia was caused by cord compression.
- Of course that, in itself, does not establish, on the balance of probabilities, that the hypoxia was caused by uterine hyperstimulation. But if other likely causes are excluded as impossible or improbable it makes the likelihood of the remaining possibility more probable. Dr. Keiling did not discount the possibility of uterine hyperstimulation as a cause. Her concern seemed to be the absence of positive evidence of "prolonged contractions". Unfortunately her cross examination on this point does not take the matter very far because it was diverted into a discussion of the effect of a previous scar on hyperstimulation when the real issue was the effect of hyperstimulation on the foetus. The reference to prolonged contractions is to be found, first of all, in Professor Robson's Report. He deals with the issue in his evidence. (It is perhaps worth noting that he was not cross examined by either Mr. Holmes or Miss Robertson on the issue of the cause of the hypoxia). It is clear from his Report that, having

excluded uterine scar dishiscence (rupture) as a cause of the hypoxia, and taking into account the otherwise healthy appearance of Hamish, he concludes that uterine contractions are the most likely cause and that these would be as a result of the effect of prostaglandin. He finds support for his view in the information given to him of Hamish's "profound heart rate changes so early in labour" and the CTG trace "which does not exclude hyperstimulation". Other supporting information he alludes to is "the rate of cervical dilation after the second dose of prostaglandin" and evidence of "abdominal pain".

- So Professor Robson's conclusion is based on the information he was given. This consisted of the medical case records but also the post mortem report. In his evidence he was also asked to comment on the evidence given at the Inquiry by those who had compiled the records and who had witnessed the events of Mrs. Adamson's induction and Hamish's delivery; and also the evidence of Mrs. Adamson herself. It is necessary to look at the evidence about these matters to see which of the information he was given was accurate. Professor Robson's evidence was that, from his examination of the notes, he would exclude hyperstimulation at 22.20 but by 12 midnight "the circumstances and events would be consistent with it being present". That is a reference to what Karen Hastings had recorded in the notes at 12 midnight. The evidence of what happened between 22.20 and 12 midnight comes primarily from Karen Hastings and Mrs. Adamson. (Until shortly after 22.20 Mrs. Adamson was being cared for by Alison Rogerson. She then left to care for another patient.) There are important discrepancies between what Mrs. Adamson and Karen Hastings said. In particular they differed about what happened as Mrs. Adamson left her bath at about 23.40. Mrs. Adamson said that she had gone to her bath about 22.45. This helped her to relax. When in the bath she started to get pains which became worse and worse until they became unbearable. She had difficulty drying herself because of the pain. She then described an incident in a corridor when she had another "terrible pain" and leant up against a wall. That is when she said she first met Karen Hastings who told her she would be with her in a minute. On returning she asked Mrs. Adamson if she was all right and assisted her to her room. Mrs. Adamson said that she mentioned her terrible pains. After she returned to her room the TENS machine was applied. She asked Karen Hastings to phone her husband and told her she could not cope with the pain. She described an incident where she was gripping the bedhead and Karen Hastings told her to "leave that there for the next patient". Shortly after that the internal examination was carried out.
- Karen Hastings said that she first met Mrs. Adamson in her room at 23.40. She had come out of her bath and was complaining of being uncomfortable. Alison Rogerson had told her that Mrs. Adamson was having "mild tightenings" and she had gone to the bath to relieve her discomfort. It was the intention to relieve this by application of a TENS machine - a nerve stimulator which can provide low level pain relief and by administering Triclofos, again a low level relaxant. She took the TENS machine to Mrs. Adamson. She monitored the foetal heartbeat manually. It was regular. There was discussion about Mrs. Adamson's anxiety about the birth and whether she should have opted for a caesarean section. She denied that Mrs. Adamson complained of severe pain. It is clear that Karen Hastings did not form the view that Mrs. Adamson was in labour despite the tightenings which she said she associated with early labour or the effects of the prostaglandin gel. A tranquilliser was given at 23.50 and a chair

provided. At 12 midnight she noted contractions - "mild 1 in 2" - and noted "feels sore all the time". She was still of the view that this was only the early stages of labour. She felt no concern. All this is recorded in the notes on which Professor Robson based his opinion about hyperstimulation. A vaginal examination was carried out because of the contractions and the continuing request for analgesia. That is when she decided that Mrs. Adamson should be transferred to the labour ward as " she had progressed into labour and needed analgesia".

- Of the two witnesses Mrs. Adamson was the more credible about these events. Firstly because generally I found Karen Hastings to be defensive and apprehensive when she had no need to be. Examples of that are her examination by Mr. Martin in relation to staffing levels and why it was not possible to continue with two inductions planned for 17 September; or when she was asked about "one to one care" and whether there was anyone to provide that for Mrs. Adamson. She was one of several witnesses employed by the Trust whom it was necessary for me to warn to answer the questions truthfully and without considering the conclusions which the Inquiry might draw. But, secondly, because of the nature of the events themselves. Either the detailed incidents described by Mrs. Adamson about the pain in the corridor, and the bedhead, happened or they did not. Her evidence was very specific. If she was lying then it was a very specific and deliberate lie. That did not fit in with her presentation as a witness. Clearly she was concerned and angry about Hamish's death but I did not get the impression that she was being deliberately untruthful when recalling its circumstances. I did not feel that she was mistaken about these events. On the other hand Karen Hastings was hesitant and, to some extent, unsure. Difficult questions sometimes produced no answer. She accepted the possibility of both incidents. Now there may be various reasons for her inability to recollect the incidents which Mrs. Adamson described. She was apparently very busy that night (I will examine that in the context of staffing). She may also have felt, although she did not say as much, that Hamish's distress could or should have been detected earlier. It may be that she should have been more alert to the possibility of hyperstimulation. But for present purposes that does not really matter. The point is that nothing in the evidence of Karen Hastings detracts from the factual information on which Professor Robson based his conclusion. The evidence of Mrs. Adamson about pain supports it. He was not aware of that evidence when he compiled his report. When it was put to him it confirmed his conclusion.

  Accordingly I am satisfied on the balance of probabilities that the hypoxia which caused Hamish's death resulted from uterine hyperstimulation caused by the application of the prostaglandin gel. I exclude from that finding the bilateral pleural effusion, peritoneal effusion and adrenal haemorrhage, referred to in the post mortem Report and which Mrs. Davie submitted I should include, because I am satisfied that these relate to, and were most likely caused by, the effects of the attempts to resuscitate Hamish.

What was discussed at the meeting with Dr. Gordon on 8 September 1998?

- This is of significance principally because of the suggestion put to Dr. Gordon in cross examination that Mrs. Adamson should have been advised to have an elective caesarean section operation rather than attempt labour vaginally. She

was not Dr. Gordon's patient. He saw her when she attended at Cresswell on 9 September following her expressions of unease to Eleanor Brodie about the pregnancy going beyond its term and the previous caesarean section in Portsmouth. The visit has to be seen in that light and in the context of her previous meetings at Sanquhar on 12 March and 23 July with Dr. Mensah and Dr. Grieve. Until she saw Eleanor Brodie there seems to have been no anxiety about the mode of delivery. There had been discussion with Dr. Mensah and reassurance that most women who had previous caesarean sections went on to deliver vaginally on subsequent occasions. Both Mr. and Mrs. Adamson denied that Dr. Gordon had raised the question of an elective caesarean section. He said that he had. His note of the meeting refers to "anxious to discuss mode of delivery". He also wrote "keen for" and did not complete the note. In evidence he said that it was intended to say "keen for vaginal delivery" but he must have been distracted. Immediately after the meeting he wrote to Portsmouth for the previous notes. In that letter he referred to anxiety about the route of delivery and Mrs. Adamson being "keen for vaginal delivery". A further consultation was arranged with Dr. Mensah.

- Any discussion with Dr. Gordon did not take place in a vacuum. It was the previous caesarean section which was the root of Mrs. Adamson's concern. The purpose of Dr. Gordon's inquiry of Portsmouth was in relation to the previous operation. It seems improbable that such joint concerns did not result in the mention of a caesarean section as a possible alternative to natural delivery. There was no need for Dr. Gordon to make a decision or even advise the Adamsons definitively that day. She was to see Dr. Mensah, under whose care she was, before it was likely she would go into labour. In these circumstances I accept as more probable the evidence of Dr. Gordon that the subject was raised but any decision was deferred until the meeting with Dr. Mensah. It seems to me that Dr. Gordon did all that might have been expected of him to assist with the concerns Mrs. Adamson was expressing. For the reasons which I discuss below, it would not have been unreasonable for him to advise her that a trial of vaginal labour, whether naturally or by induction, was a reasonable option for her. My impression is that he would certainly not have dissuaded her from an elective caesarean section but there was no need to address that issue finally that day. There is, in my opinion, nothing which he could or should reasonably have done at that meeting which might have avoided Hamish's death.

What was discussed at the meeting with Dr. Mensah on 15 September 1998

- I deal with this area because it occupied quite some time and it was raised by Miss Robertson as significant in the general assessment of Mr. and Mrs. Adamson' credibility. It also related to the decision which was made not to proceed immediately to delivery by caesarean section rather than attempt labour, whether induced or occurring naturally. Mrs. Davie submitted that, depending on what I found happened at the meeting and what advice, if any, was given, accepted or rejected a question could arise as to reasonable precautions whereby Hamish's death might have been avoided. The relevant witnesses were those at the meeting, Mr. and Mrs. Adamson, Dr. Mensah and Lynda Tweddle, the midwife in attendance at the meeting. There seems little doubt that the issue of an elective caesarean section operation was discussed.

Dr. Mensah notes three choices in Crown Production No. 1 one of which is an elective caesarean. He said that he mentioned the availability of an operation that week . Lynda Tweddle confirmed that . Mrs. Adamson confirmed that it had been discussed and offered . I felt that throughout his evidence Dr. Mensah was at pains to stress that the choice was really for Mrs. Adamson. He felt that either option could be justified on medical criteria. He had raised the issue of the operation that week because of Mrs. Adamson's anxiety at the meeting. He seems to have discussed the statistical likelihood of someone who had had a previous caesarean section delivering vaginally (60%). Mrs. Adamson confirmed that. He felt however that she wanted to try natural delivery which had been her apparent choice up until then. Both Mrs. Adamson and her husband said that they had asked for advice. Neither Dr. Mensah or Lynda Tweddle could recall that. I think all the witnesses approached their recollection of the meeting with the benefit of hindsight. Understandably Mrs. Adamson wished she had accepted the possibility of the elective operation. Dr. Mensah clearly felt the same, as he seems to have indicated in a statement he later gave to Inspector Anderson. That, in large part it seems to me, accounts for the different recollections and the different emphasis placed on different aspects of the discussion. Dr. Mensah was trying to reflect in his advice the importance of patient choice. Mr. and Mrs. Adamson wanted advice - effectively a decision for them by the Doctor. While Dr. Mensah does not recall specifically being asked for his advice it is clear that he gave advice - that both options were possible and the Adamsons accepted that in light of Mrs. Adamson's preferred choice. Dr. Gordon, in his letter to Portsmouth had expressed a doubt that Mrs. Adamson would manage to deliver vaginally. That doubt was not made known to the Adamsons although it is clear that Dr. Mensah discussed the statistical chances of success. Mr. Adamson said that knowledge of that doubt would have caused him to advise his wife to go for the elective section and that may well be so. But the real questions are whether it was unreasonable for Dr. Mensah to couch his advice in terms of the choice he offered and whether it was unreasonable for Mrs. Adamson to choose to try labour. Only if either of these questions can be answered in the affirmative could it be said that anything else could have occurred whereby Hamish's death might have been avoided. The issue of the choice offered is simply dealt with. I was satisfied that Dr. Mensah was truthful in his evidence that there was no reason why labour should not have been attempted and might have succeeded. And that he offered the opportunity for induction because of Mrs. Adamson's anxiety. That this was acceptable practice was confirmed by Professor Robson. That presupposes that the care during the induction procedure is adequate and appropriate, an issue to which I shall return. In light of that there can be no question whatsoever of Mrs. Adamson's decision to follow the advice being unreasonable. She said that she asked about whether she would be monitored. I felt that, in retrospect , she was perhaps emphasising the CTG aspect of that but her evidence was clear that she had CTG monitoring in mind as well as nursing care. I believed her. As I did when she said that she received assurances about monitoring. I am satisfied therefore that, at the meeting on 15 September 1998, there was no precaution which it would have been reasonable to take which might have avoided Hamish's death.

Was Mrs. Adamson "keen" for vaginal delivery?

- It seems to me that the main difficulty which arose here during the inquiry (and it took up some time) is the emphasis which parties sought to place on the word "keen". It was used by Dr. Mensah in his note after his meeting on 12 March. It was repeated in Dr. Gordon's (uncompleted) note after his meeting on 9 September and in his letter to Portsmouth. When asked about the word Mrs. Adamson did not accept it as an accurate reflection of her feelings. She said she would have preferred vaginal delivery if possible. I doubt if she ever used the phrase "keen" when discussing how her baby was to be delivered. Significantly the word does not appear in inverted commas in Crown Production No. 1, in contrast to the phrase "post mature" noted by Dr. Gordon. In evidence he said that this was noted in that way to reflect the fact that Mrs. Adamson had used these words. It was not Dr. Mensah's evidence that the word had been used at his meeting on 12 March. It seems probable that Mrs. Adamson's preference was simply noted in that way. My impression is that Mrs. Adamson was not pressing for vaginal delivery but would have wanted to adopt that course unless advised it was inappropriate. She was not so advised. I have concluded that not advising her that such a course was inappropriate was not unreasonable. So, in one sense, the issue of whether or not she was "keen" is not of great importance save as an example, perhaps, of the loose use of language and how that can be repeated by those coming subsequently to a set of notes which contains such a phrase; and the need to guard against that possibility for misunderstanding. In the case of Mrs. Adamson's pregnancy the use of the phrase had no real effect. Dr. Gordon sent for the Portsmouth notes. Dr. Mensah had an informed discussion with her about the options open to her. She was not advised or allowed to choose an option which was inappropriate. Once the decision was made the use of the term in the notes should not have affected her treatment during induction or labour. There is no evidence that it did.

What occurred during the period between Mrs. Adamson's admission to Cresswell at 8.30 on 17 September and the first administration of prostaglandin gel at 15.10?

- The significant factual issues here are why Mrs. Adamson's induction did not commence until 14.45; and what can be learned from this period about the proposed staffing arrangements for her care. Women like Mrs. Adamson, who had previously given birth, attended for induction first thing in the morning. Labour for such women was likely to ensue more quickly than for a woman who had not laboured before. The early attendance was so that inductions could be commenced promptly; and, if possible, allowing for various factors, birth achieved during the daytime working hours of the hospital. Dr. Gordon said that. So did other witnesses. I have to say, however, that some of those employed by the Trust attempted, in evidence, to draw back from the simple and logical explanation that early admission and commencement of the induction was in the expectation (hope may be a more accurate expression given the unpredictable differences in how soon labour will ensue in different women) that the labour would conclude during the working day. It was an example of a general reluctance of Trust employees to confront the reality of what had happened on 17 and 18 September. There was nothing in what happened to Mrs. Adamson after she arrived at 8.30 to contradict the intention that induction could and would commence during the morning. The normal procedure for induction

effectively commences when the CTG machine is attached prior to the application of the prostaglandin gel. This is for half an hour to monitor for uterine activity and foetal heartbeat. There is then an internal examination to assess the state of the cervix. That assessment is by reference to the Bishop score. If the cervix is unfavourable and requires stimulation the prostaglandin gel is applied. CTG monitoring is then re-applied for one hour. Janice Gourlay applied the CTG at 10.19. That is clear from the tracing. Her evidence about the time of the commencement of the monitoring is mistaken. It is clear from her evidence that it was her intention to proceed with the remaining stages of the induction. Indeed there was little point in commencing the monitoring if that was not the case because if there was to be a delay in applying the gel (as in fact happened) the monitoring would have to be repeated (as in fact happened). She had actually obtained the gel and was returning to Mrs. Adamson but was diverted to another patient. In the evidence which I heard there was no satisfactory explanation about why Mrs. Adamson's induction did not commence before the afternoon. Certainly there was an emergency at about 11.30 which diverted Janice Gourlay. When that happened there were insufficient staff to commence the induction. But what happened before 11.30 to prevent the application of the gel? Janice Gourlay could not explain that. Neither could Roberta McKean who took over her care when Janice Gourlay left. In fact two inductions were planned for that morning - Mrs. Adamson and Mrs. Rippingale. The staffing situation did not allow for both.. A decision appears to have been made that one would have to receive priority. Typical of the confused and evasive evidence about this was that of Roberta McKean who spoke of baby sitting difficulties for Mr. and Mrs. Adamson being a factor in such a decision even before Mrs. Adamson had arrived in the ward. That was not what Janice Gourlay said. And of course that would be unlikely to be known to the staff before her arrival. So I am driven to the conclusion that either there was a lack of staff on duty for what was planned that day or there was a lack of activity and urgency in the ward after the CTG monitoring commenced. For example Janice Gourlay went for her tea break (she cannot be criticised for that). This must have been after she applied the monitor at 10.19 and before her approach to the room with the gel at about 11.30. Apart from that there is no explanation as to why she or another midwife could not have taken the five minutes or so to carry out an internal examination, apply the gel and start the process. Of course monitoring would have continued but this would have been by CTG - no different really from what Roberta McKean was asked to do during the tea break. The induction could reasonably have commenced earlier.

- After Janice Gourlay was called away the Adamsons were told that the induction would have to be delayed. I accepted as truthful their evidence that they were not best pleased by that but accepted the situation. Because of the lack of Red Team and core staff Jacqueline Carroll from Orange Team was asked to start the induction which she did by re-applying the monitor at about 14.45. This was satisfactory and after an internal examination the gel was applied at 15.10. What is significant, however, is that there appears to have been no proper discussion of whether the induction should have been delayed until the following day. I believed the Adamsons when they said that they had expressed concerns and that if offered the choice would most likely have preferred to wait. Even if they did not, the evidence of the nursing staff was that this was not considered. Given the apparent staffing difficulties earlier and what happened later that

evening it is surprising to say the least that no informed choice was offered. But if there was to be no difficulty in managing the labour and any reasonably anticipated difficulty that need not have been a problem. It was clear from the evidence of Julia McQueen that such later starts, in anticipation that the birth would not take place until the following day, happened quite routinely in Glasgow Royal. But the pattern there seemed to be that the second application of gel would be delayed until next morning and the night cover appeared to be greater than at Cresswell. Neither circumstance was to apply in Mrs. Adamson's case. So the question is posed - could the induction reasonably have been delayed until the following day. Dr. Gordon thought so. I agree.

- I should end this discussion by reference to a difference in the evidence of Mr. and Mrs. Adamson and Janice Gourlay lest it be thought that Mrs. Adamson's care was affected by Janice Gourlay rushing to get off early for the weekend. Both the Adamsons were sure they had seen her in the car park at lunch time about to go home for the weekend. She denied it. While generally I found both Mr. and Mrs. Adamson to be credible and reliable witnesses they are almost certainly mistaken on this point. Janice Gourlay was engaged with the emergency which diverted her from Mrs. Adamson at 11.30 until later in the afternoon. That is clear from the medical notes for Mrs. Robb and her further cross-examination by Mrs. Davie.

The decision to administer the second dose of prostaglandin gel at 21.25.

- This was done by Jacqueline Carroll who cared continuously for Mrs. Adamson from 14.45 until 21.45 - the only period when Mrs. Adamson appears to the received the "one to one" care referred to by many witnesses. Need she have administered the gel? It was in line with the guidelines - 6 hours after the previous application. But if Dr. Gordon is correct that the induction need not have proceeded at 15.10 the same applies to the second administration of gel. Julia McQueen confirmed that such a delay would not be uncommon in Glasgow Royal. Mrs. Rippingale's induction did not proceed to a second dose of gel. The second dose made more likely a labour and delivery during night hours. That could have been avoided. It happened very shortly before a staff handover at 21.45. If it had not happened it is very unlikely Mrs. Adamson would have gone into labour during the night in the circumstances in which Hamish's death might have been avoided.

In what circumstances should a woman whose labour is being induced and who has had a previous caesarean section be monitored by CTG?

- For Cresswell the short answer to that is to be found in the policy operated at Cresswell and set out in their guideline document "Management of Induction of Labour". This requires CTG for 30 minutes before the prostaglandin gel is applied and for 1 hour thereafter. There is also reference to the criteria for continuous electronic cardiotocography in a further guideline document "Guidelines Care in Labour". One of the criteria mentioned there for such continuous monitoring is "Bad obstetric history". Both Dr. Gordon and Dr. Mensah confirmed that it was also the policy at Cresswell to institute such monitoring when a woman with Mrs. Adamson's history went into labour.

- The Cresswell Guidelines do not exist in isolation. For example, Professor Robson in his Report quotes Guidelines issued by the Royal College of Obstetricians and Gynaecologists relating to Induction of Labour. The relevant passages are as follows:

  "There are no trials which indicate the appropriate level of foetal surveillance during induction. Continuous cardiotocography is recommended where oxytocin infusion is used. If prostaglandins are used for cervical ripening, it would seem prudent to perform cardiotocography before administration, and when contractions ensue. If there are other risk factors, e.g. foetal growth retardation, continuous cardiotocography should be performed throughout the induction process." and

  "Attention was also drawn to the special care needed when induction of labour is undertaken in a woman with a previous caesarean section, especially if the cervix is unfavourable and prostaglandin or oxytocin is used. (The management of labour in such a case is likely to be the subject of a future guideline.)"

  It is worth noting that no such further guideline has yet appeared.

  I think there is little doubt that had Mrs. Adamson been subjected to continuous CTG monitoring from 22.20 the uterine activity which led to the bradycardia and hypoxia would have been apparent earlier and that earlier operative intervention would have saved Hamish's life. That, in effect, is now what happens at Cresswell. All inductions of mothers who have had a previous caesarean section are carried out on the labour ward. These mothers are continuously monitored by CTG after the gel is applied. It was clear from the evidence that this change flowed directly from Hamish's death. That was acknowledged by Dr. Mensah and is confirmed in his letter to Mr. and Mrs. Adamson.

- In his Report Professor Robson identifies a key issue as whether CTG monitoring should have been undertaken between 22.20 and 00.46 when Mrs. Adamson was transferred to the labour ward and the CTG was recommenced. He concluded that it should. In general that remained the view which he expressed in his evidence. 22.20 is the obvious possible starting point for such monitoring because that is when it was discontinued. In theory any point thereafter could have been such a starting point but, once monitoring had been discontinued, there would realistically have required to be some change in the condition of Mrs. Adamson or that of Hamish to alert a midwife or Doctor to the need to do so. The contact between Mrs. Adamson and Karen Hastings when she left her bath just after 23.30 might be one. So, perhaps, could the events during the period from 23.30 until 00.20 when Karen Hastings diagnosed the onset of labour. 00.20 was certainly another because the evidence of all the Cresswell Doctors was that CTG monitoring should start when labour had commenced. But before examining each of these particular possibilities and whether it should have triggered CTG monitoring of Mrs. Adamson it is necessary to look more closely at the evidence about the general circumstances which point to the need for such monitoring and the guidelines about that given to Cresswell staff.

- The CTG monitor produces a paper trace. This shows foetal heartbeat and uterine activity. It will show contractions of labour. But the medical witnesses were unanimous that it is not the best guide to whether or not labour has commenced. Evidence of uterine activity on the trace, while it can be consistent with labour, may also be consistent with other activity. All were agreed that it could not be looked at in isolation in diagnosing labour but had to be viewed along with the observations of the midwife, principally in palpating the patient's abdomen, and the subjective feelings of the patient about pain and movement relayed to the midwife. It was a combination of these, focused through the experience of the midwife, which led to the diagnosis. It is not an exact science and different obstetricians or midwives may diagnose labour as starting at different points. The significance of the start of labour for a patient such as Mrs. Adamson, with a previous caesarean section, is that CTG monitoring should recommence whenever labour starts. That is because the danger of uterine rupture (the previous scar being a weak point) is greater. And this poses a risk to the foetus. The monitoring is important, for any patient, to assess the condition of the uterus and the foetus before the gel is applied and to monitor these during the hour after its application when the danger of hyperstimulation of the uterus is greatest. Hyperstimulation is unduly severe or prolonged contractions or not only excessively strong contractions but also elevation of pressure within the uterus between contractions. Because hyperstimulation could put greater strain, not only on the foetus but also on the previous scar it poses a greater risk to a woman who has had a previous caesarean section and to the foetus. As I understood the position the monitoring is primarily aimed at monitoring the foetal heart to detect any distress in the foetus. The measurement of uterine activity is an aid to the interpretation of that (as well as providing information which can assist a diagnosis of the onset of labour or any hyperstimulation which may occur). But the risk to the foetus does not suddenly end after one hour. I am not sure that any witness said so in terms but, as a matter of common sense, it must be particularly important to assess the results of the monitoring at the point when the machine is disconnected and the benefit of further observation will be lost.
- Professor Robson was clear that he would have advised continuous CTG monitoring once painful uterine contractions had been established. He also referred to concern if contractions had developed rapidly after the application of prostaglandin gel associated with discomfort. Likewise Professor Hillan accepted these as indicators for the need for continuous monitoring. As did Dr. Gordon, though his acceptance was set in the context of hindsight in relation to what had happened to Mrs. Adamson. I found the evidence of Julia McQueen, who was generally more supportive of the actions taken by the nursing staff that night, difficult to follow on these matters. As Mr. Martin drew from her in cross examination there were assumptions which she made about the factual background which were incorrect. I preferred the evidence of Professor Hillan. Added to that was the significance of any request for analgesia in the assessment of pain. So although there was a lot of evidence and many questions about when CTG monitoring should have been instituted there was little disagreement about the criteria which should have been in the forefront of the mind of anyone assessing a patient who might require it.
- There was a lot of confusing evidence about the terms "high risk", "special care" and "bad obstetric history" in relation to monitoring during induction. Some of

these terms are to be found in the Royal College Guidelines annexed to Professor Robson's Report and in the Cresswell Guidelines. There was also reference to Mrs. Adamson having a "trial of labour". This was variously described as any labour - which really robs the term of any meaning. Some witnesses did not appreciate that Mrs. Adamson was having such a trial. The example of "risk" in the Royal College Guidelines is "foetal growth retardation". Some witnesses interpreted that as a risk which related to the child and not to the mother - a risk not present in the case of Mrs. Adamson. Others gave the term a more general interpretation which could include a previous caesarean section and the greater possibility that brought of possible scar dishiscence during labour. Similarly the term "special care" was variously interpreted in the context of labour having commenced rather than throughout the whole induction process. I will recommend that the Royal College looks at these guidelines to see if greater clarity can be given to them. It is not for me to suggest what that should be or how it might be expressed. Such guidelines are written by professionals in a specialist discipline to be read by others in that discipline. It is probably not necessary that terms which have a special or particular meaning in that context are understood in a different context by lay people. But it is concerning if there is scope for disagreement about such terms by those who have to implement any such guidelines.

- So far as Cresswell is concerned there was no real assistance for staff about these matters in any of the guidelines. And, not surprisingly, there seemed to be some confusion about what they meant or what their significance might be for instituting or continuing earlier CTG monitoring. There was no requirement to prepare a labour plan for any individual patient which might have highlighted any particular factors about their condition or previous history which were of significance. Professor Hillan referred to that.

Why was CTG monitoring discontinued or not continued at 22.20?

- When this happened Mrs. Adamson was being cared for by Alison Rogerson. She had taken over from Jacqueline Carroll who had applied the second dose of prostaglandin gel. Ignoring the question of whether the gel should have been applied at that time of the evening, which I have already discussed, there was nothing in Mrs. Adamson's condition which indicated the application was not appropriate. The CTG was applied before the application of the gel, and after, for the periods of 30 minutes and 1 hour recommended in the guidelines. When she discontinued the monitoring at 22.20 Alison Rogerson noted "Aware of mild tightenings 1 in 2 1/2 -3 minutes. Anxious and tense re labour previous experience in labour". Mrs. Adamson was advised to take a warm bath and there was discussion about the application of the TENS machine. So there must have been some indication from Mrs. Adamson of discomfort or pain. What she says about this in evidence does not suggest that she made Alison Rogerson aware of any particular pain or discomfort. Alison Rogerson's recollection is not dissimilar. She obviously had in mind the possibility of pain relief after the bath but my impression from her evidence is that she was not alerted to anything beyond the anxiety and tenseness which her note discloses. That was the context in which the CTG monitoring was discontinued. Was that appropriate? Professor Robson thought not but that was in retrospect and in the context of the possibility of pain following on the discomfort discussed with Alison

Rogerson. Professor Hillan's view was also in retrospect. So was Dr. Gordon's. On balance I feel it was not unreasonable for Alison Rogerson to decide to discontinue the monitoring and allow Mrs. Adamson to go for her bath. That decision has to be seen in the context that, at that time, she expected to be continuing with her care; and the lack of guidelines about the continuation of monitoring in these circumstances. Continued care by Alison Rogerson did not happen because she was called away to deal with another patient. Her answers to questions about what she would have done if confronted with the sort of pain of which Mrs. Adamson later spoke seem to indicate that she was aware of the need for further action in that situation. But allowing the monitoring to continue at 22.20 remains a precaution which might reasonably have been taken and which might have prevented Hamish's death.

What occurred during the period between Mrs. Adamson going for her bath at 22.45 and the decision to transfer her to the labour ward at 00.20?

- For the fourth time in her stay in Cresswell (but not the last) Mrs. Adamson's care was transferred to another midwife. This was within almost an hour of the second application of the prostaglandin gel - just after a period when particular monitoring is prescribed because of the risk associated with the use of prostaglandin gel. But she did not meet Karen Hastings until after her bath at 23.40. There is no reference to the handover in the nursing notes. This is in contrast to the previous handovers from Janice Gourlay at 11.40 and 14.45 and to Alison Rogerson at 21.45. Quite why there was no contact during that period is unexplained. I have already discussed Mrs. Adamson's evidence about her pain in the corridor and explained why I did not accept the evidence of Karen Hastings about that. That is crucial to assessing the steps which she took. Even if that is discounted the bulk of the evidence indicates that by 23.40 Mrs. Adamson was in labour. Much was made in the submissions about the *ex post facto* conclusions of witnesses such as Professor Robson about that. And that is something which has to be borne in mind. While in no way suggesting that his assessment of the medical notes and the other information which he had was other than honest professional and objective it is an indisputable fact that the sad outcome of Mrs. Adamson's pregnancy was known to him; and also to the other witnesses who gave their opinion. Of course it was also known to those witnesses who had responsibility for her care and whose actions were the subject of scrutiny at the Inquiry. Much was made also of the subjective nature of the diagnosis of "true" labour or "established" labour as distinct from "early" labour. In the end of the day what Karen Hastings said about her conclusions that night amounted to her professional judgment. No one else was there. Only she had the first hand (literally so far as the palpation is concerned) knowledge of what she found. But that does not mean that she was necessarily correct in her diagnosis. Nor does it follow that her account is accurate. Her conclusion was not supported by the information available to Professor Robson and Professor Hillan or Julia McQueen. Nor does it find confirmation in the only other assessment of the commencement of labour made before Hamish's death became a fact. Sister Featherstone completed the Labour and Delivery Summary. That is a document which properly relates to events in the labour ward and not in the unit where Mrs. Adamson was at 22.20. That showed the length of the labour to delivery as "3 hrs 46 mins". Reading back from the time

of delivery (01.46) that implies that labour commenced at 22.00. In her evidence Sister Featherstone confirmed that her conclusion about the length of labour was drawn from what she read in the medical notes. During her evidence she corrected the time to 3 hours 26 minutes which takes it back to 22.20 - the note made when the monitoring was discontinued. It is clear from a reading of her evidence that the implications of her conclusions for the actions which Alison Rogerson might have taken at 22.20 or which Karen Hastings might have taken either at 23.40 or at 12 midnight dawned on her as her testimony progressed. She tried hard to find refuge in distinctions between early labour and established labour. But at the end of the day she was at least forced to concede that at 12 midnight Mrs. Adamson was in labour and should have been transferred to the labour ward and CTG monitoring commenced. That was on the basis of Karen Hasting's note:

"Not settling, contractions mild 1 in 2 feels she can't settle, trying to get comfortable on bed, feels "sore" all the time, feels she can't cope. Reassurance given".

The further request for analgesia noted at 00.15 merely supported that conclusion. The analgesia concerned would have been diamorphene which could only be given on the labour ward.

- During the period from 22.40 Karen Hastings had monitored the foetal heart at 23.40 and 00.20 and satisfactory readings had been obtained. But that was by means of a Doppler which did not provide the continuous reading of the CTG and was much less likely to have picked up the bradycardia. It cannot be without significance that within five minutes of the application of the CTG in the labour ward at 00.45 the bradycardia which led directly to the decision to operate was detected. I feel entitled to conclude that CTG monitoring should have been applied either on the disclosure of pain by Mrs. Adamson at about 23.40 or when the contractions were noted at 12 midnight. I conclude also that Karen Hastings should have diagnosed the labour after she met Mrs. Adamson at 23.40 and before she carried out the internal examination at 00.20

  What occurred during the period between 00.20 when Karen Hastings diagnosed that Mrs. Adamson was in established labour and 00.45 when CTG monitoring was recommenced after Mrs. Adamson's arrival in the labour ward?

- The significance of this period is that there appears to have been a further time before the CTG monitoring which detected the bradycardia commenced. Why was that? Karen Hastings was the midwife caring for Mrs. Adamson at that time. Once labour was finally diagnosed after the internal examination at 00.20 Mrs. Adamson should have gone to the labour ward where monitoring would have commenced. Karen Hastings was unable to take her to the labour ward because she had other patients in the ward to care for. In fact she was the core midwife whose responsibility was primarily the care of the patients in the ward. There was no one else in the ward to take Mrs. Adamson to the labour ward. Karen Hastings telephoned the labour ward but there was no one there who could assist. She then telephoned another unit and Marcia Thomson was available to

take Mrs. Adamson down to the labour ward. She was with another patient and it was approximately 20 minutes before she arrived. During part of this time Mrs. Adamson was attended to by staff nurse Margaret Thomson. She spoke to Karen Hastings being away for 15 minutes. Her task was to prepare Mrs. Adamson for the transfer. Her evidence was that this would only take a few minutes. She was available to do that but, not being a midwife, could not take over the care of Mrs. Adamson in the labour ward. Nor could she be left in charge of the patients in Unit C if Karen Hastings had gone with Mrs. Adamson. All this caused a delay in Mrs. Adamson's transfer and a consequent delay in the CTG monitoring. The transfer to the labour ward should have been achieved much more quickly. If the unavailability of staff prevented this the monitoring should have recommenced. The equipment was in the unit. It would have taken 5 minutes at most to set up. (The explanation of Julia McQueen, that the monitor restricts movement, seemed to me to be primarily a matter for the patient and so not a reason not to monitor by CTG. In any event, at 00.20, it had no relevance.) Either of these steps could reasonably have been taken.

The circumstances in which Dr. Livingstone was contacted.

- Once Dr. Nicholls had decided that a caesarean operation was to be performed the anaesthetic staff had to be contacted. To understand the means whereby this was done requires some knowledge of the telephone system at Cresswell and the Infirmary. This was largely provided by the evidence of Pauline Burn, the Telephone Services Supervisor and also in the Affidavit of Joan Brown the telephonist on duty during the evening of 17 and morning of 18 September 1998. The hospital switchboard is at the Infirmary. All external calls, including those from Cresswell, go through that. There is an internal logging system which retains a record of these. In addition the BT accounts which detail all external calls are retained. The logging system for Cresswell was inoperative because of a fault between the hours of 12 midnight and 6 am on 18 September 1998; and had been for some time before that. The records for the main hospital logging system were destroyed at some point before the beginning of 2000. Most calls from Cresswell to the switchboard go through on one of four 0 lines. There is also a 3333 line for emergencies. That is to a separate telephone in the switchboard room. It receives priority when it rings. Any such calls are recorded in an incident book. Any problems or difficulties encountered by the telephonists in, for example, contacting any member of staff are recorded in a communications book. Joan Brown also manually recorded any calls made or received in "scroll book". That too has been destroyed.
- The factual issue which arose in relation to the calling of Dr. Livingstone was the apparent gap in time between Dr. Nicholl's decision to operate and Dr. Livingstone's arrival at Cresswell. This was approximately 20/25 minutes. As the anaesthetists also have to service the Infirmary and are generally "off site" so far as Cresswell is concerned it will take them some time to get there but should not take 20/25 minutes. Brian Anderson measured the distance as 1.35 miles. The apparent delay had clearly been an area of concern immediately after Hamish's death. Both Dr. Gordon and Mrs. Thorpe referred to that. (I will examine separately whether any concerns were properly or thoroughly investigated at the time.) The evidence about the timing of any call to Dr. Livingstone is difficult to reconcile. Dr. Clyde accepted that he had been asked to call her almost as soon

as Dr. Nicholls made her decision and said that he did so . This must have been just shortly after 01.00 (Dr. Nicholls called Dr. Gordon at 01.03). But Dr. Livingstone said that she did not receive the call until 01.18. She was in her room at the hospital residence. She said she saw the time on her clock when her bleeper went. I believed her. She had certainly arrived at Cresswell and was basically prepared for the operation by the time Mrs. Adamson arrived in the theatre just before 01.35. So she must have arrived at about 01.25 which was consistent with the travel time she spoke to for arrival at Cresswell. The time of 01.18 is also consistent with the evidence of Dr. Nicholls who had to phone herself ("again" she said) when she realised that there had been no contact from the anaesthetist in response to the instructions she had given. She said that was about 10 minutes after she had given these instructions. There appears to have been only one call to Dr. Livingstone. That is clear from Joan Brown's Affidavit. This implies that either Dr. Clyde was not asked to make the initial call; he did not do so; or that the earlier call was not put through to Dr. Livingstone. The logging records would have identified the calls from Cresswell to the switchboard. If the calls had been made on the 3333 line they should have been recorded in the incident book. If there had been a delay or difficulty in the telephonist contacting Dr. Livingstone that should have been recorded in the communications book. No such records were made. Pauline Burn who had, in September 1998, looked at the hospital logging system in relation to the call made to Dr. Gordon at 01.03 by Dr. Nicholls was unable to recall if it disclosed any other calls at about the same time. In fairness, but surprisingly given the initial interest in the apparent time gap before Dr. Livingstone arrived, she was not asked to do so. The other relevant evidence came from Susan Stones. She had driven home arriving she thought at about 01.20. The call from the hospital came just as she arrived. She was convincing in her recollection of that. Oddly no one, including Joan Brown, speaks to having made the call to her. She said that she got into her car and drove straight to Cresswell quickly and that this would take her about ten minutes. A call time of 01.20 is consistent with both her arrival time in theatre after Dr. Livingstone and the time of the call to Dr. Livingstone at 01.18. It is not, however consistent with the BT record of the call to her home which is shown at 01.09. It is simply impossible to reconcile all this evidence. I did not find Dr. Clyde to be an untruthful witness. Joan Brown did not give evidence in person and so I have no means of assessing her credibility or testing it against Dr. Clyde. The records which would have established the matter definitively no longer exist. I am satisfied, however, that there was nothing in the time taken for Dr. Livingstone or Susan Stones to attend, after they were called, which might have avoided Hamish's death. What is clear beyond doubt is that the records to establish exactly what happened were available and could have been examined immediately after the death. What is almost unbelievable is that some concern was expressed about the delay, Pauline Burn was asked to give some information but the information relevant to the concern was neither sought nor retained. I will return briefly to that subject when looking at such inquiries as the Trust themselves carried out.

Why did it take from 01.00 until 01.46 to have Hamish delivered by caesarean section?

- This period can be conveniently divided into different sections. It commences with Dr. Nicholl's decision to perform the operation. It is difficult to see any unnecessary delay in the approach to that decision. Once CTG monitoring had commenced at 00.45 the bradycardia was detected within 5 minutes and, after Mrs. Adamson was moved to ensure that the reading was not prompted by her position, confirmed at 00.55. Marcia Thomson immediately called on Dr. Clyde and Dr. Nicholls attended shortly thereafter. She carried out an internal examination to see if delivery by any other means would have been possible e.g. by forceps. She concluded it was not. She telephoned Dr. Gordon to confirm her decision. She was quite clear that she had made the decision by then (01.03). And it appears that Dr. Gordon trusted her professional judgment. So it seems very probable that she would have told the other staff who were to be involved in the operation to proceed with their preparations no later than, or at least immediately after, 01.03. That is what Dr. Clyde said happened. Looking to the other end of the period the delivery was at 01.46. The operation commenced at 01.42 when the notes record that Mrs. Adamson was draped. There can be no criticism of that. It was quick. The issue raised at the Inquiry was what happened between 01.03 and 01.42. Need it have taken so long? Could any part of the preparation reasonably have been done more quickly? In discussing this I am conscious that there is a danger of being over exacting after the event but this was one of several successive periods which led up to Hamish's death. I have already concluded that there various actings at earlier stages which could or should have been done differently. Some of these led directly to a failure to detect the bradycardia until 00.50 by which time Hamish's position was perhaps compromised but not irredeemably so far as a live birth was concerned. So the issue of whether the preparations for operative intervention could reasonably have happened sooner is significant not only in itself but also as the end of a process.
- A convenient starting point is perhaps what was the stated expectation about the time between decision and delivery at Cresswell. This is to be found in "Guidelines Care in Labour". There, under the heading "Procedure for prolonged bradycardia", is a timetable which contemplates a time of 15 minutes. It is in the following terms:
  "3 minutes; Draw attention and review clinical picture prior to CTG - **call doctor**

  6 minutes Expect recovery of the FHR towards the baseline.

  9 minutes If no recovery, prepare for operative delivery

  12 minutes Operative delivery should have started.

  15 minutes Baby is delivered."

  In fact these times appear to be predicated on a starting point of the discovery of the bradycardia and the calling of the doctor. In Mrs. Adamson's case that would have been at 00.55. They seem to allow only 6 minutes for the preparation for the operation and its completion, at least to the point of delivery. The only part of the timetable which bears any relationship to what happened to Mrs. Adamson is the time of the operation itself. The plain fact is that these guidelines provided no meaningful measure of what was or was not a reasonable time to prepare for

Mrs. Adamson's operation. It was only really Dr. Nicholls who thought that timetable was realistic. She seems to have thought so at the time because that is what she indicated to Dr. Clyde. Both Dr. Gordon and Dr. Mensah accepted that the guidelines could not be met. They seem to have been drawn from some procedural ideal for a large metropolitan teaching hospital. Professor Robson, whose experience was in such a hospital, agreed. They were more ambitious than those found in "Towards Safer Childbirth" where the matter is expressed as an anaesthetic response time to allow a caesarean section to be started within 30 minutes of the decision to proceed They were also considerably more ambitious than the average times achieved in caesarean sections in Scotland in 1994 (45.2 minutes for emergencies in labour). The Cresswell guidelines were worthless. Mrs. Thorpe's attempt to justify them as a focus is, in my view, entirely misconceived. There was no realistic or commonly understood target for staff to aim for. In these circumstances it is hardly surprising that there was considerable confusion in the evidence about how long each took in their part of the preparations or how long they should have taken.

- Mrs. Davie submitted strongly that there was nothing in the evidence of those involved in the preparations for the operation to explain why it took until 01.42 for it to commence. Mr. Martin concurred in that. To a large extent that is correct. If Sister Featherstone is taken as an example she was adamant that it had not taken longer than 15 minutes to prepare the theatre. She had to hand over the labour ward to someone else. She said that would take between 2 and 5 minutes. She must or should have been told at about 01.03 that the operation was to proceed. She said that she was ready at about 01.30 when Dr. Livingstone had arrived. Dr. Livingstone must have arrived, completed her preparations and been ready by 01.35. By then Mrs. Adamson was in the theatre. The medical notes show Dr. Livingstone noting her first reading of the patient's condition at 01.35. So there is about 5 to 10 minutes unaccounted for except to hand over the ward. Dr. Clyde and Marcia Thomson are in the same position. Each had tasks which, when examined in evidence, appear to have been capable of completion well within the time from Dr. Nicholl's decision until Mrs. Adamson arrived in theatre. I have discussed the time taken to call Dr. Livingstone. Any delay in contacting her should not have affected what most of the other staff were doing from the decision time at 01.00 or 01.03 when it should have been known to them that the operation was to proceed. My impression is that the lack of a realistic and generally known and understood target for the completion of the operation meant that those involved approached what they had to do in a well meaning and, no doubt, caring way but without any real sense of how their part impacted on the whole. That, it seemed to me from the evidence which I heard, robbed the preparations of the sense of urgency they demanded and which might possibly have allowed the operation to start earlier. Beyond that it is not possible to say, on the balance of probabilities, how much earlier. It can always be said in retrospect that things could have been done more quickly but measured against what seems to be acceptable practice elsewhere and the opinion of Professor Robson in his Report that the decision to delivery interval was "entirely acceptable" I do not think it can be said that the actual preparations for the operation as carried out by the staff on duty might have been carried out so much more quickly as would enable me to conclude that this would have avoided Hamish's death. But they might have done. There

was an unreasonable and avoidable delay of at least ten minutes or so between Dr. Nicholl's instruction to contact the anaesthetist and such contact being made. If all the other preparations had been done as quickly, for example, as Sister Featherstone thought was possible for her (15 minutes) it might have been possible to deliver Hamish at or close on 01.30 when the last heartbeat was detected. It is impossible to say that would have avoided his death but it might.

The circumstances in which Dr. Higgs was contacted and attended at Cresswell, the steps taken to resuscitate Hamish and Dr. Bell's ability to do so.

- It is standard practice to have a paediatrician on hand when a baby is delivered. On 18 September the consultant on call was Dr. Marietta Higgs. She also had to cover the Infirmary. Very sensibly she had chosen to live between the two. The travel distance to Cresswell was within 2 minutes. The paediatric Senior House Officer on call at Cresswell that morning was Dr. Jacqueline Bell. She was relatively inexperienced. She had been working in the paediatric department since the beginning of August. She had completed a day long neonatal resuscitation course and a further seminar at Cresswell. She had assisted and been supervised by more senior paediatricians at the initial resuscitations she had attended. She had attended about 20. She had not previously dealt with the resuscitation of a baby which was completely unable to breathe. When Dr. Nicholls decided the caesarean was necessary Hamish's condition was very serious. He had a prolonged bradycardia. That is what Dr. Nicholls noted in the medical notes. That is what was communicated to Dr. Livingstone. If Dr. Higgs had known that she would have attended herself for Hamish's delivery. She did not. Why was that? It seems that Dr. Bell was under the impression that Hamish had a recovering bradycardia. Why she thought this is not at all clear. No one else seemed to be under this impression. The evidence is littered with references to Hamish's situation being similar to a cardiac arrest, the agreement of numerous witnesses that this was the case and the need for great urgency. Now I accept that Dr. Bell was busy with her own preparations for the delivery and with other patients in the labour ward and that others would be similarly engaged. There might have been limited opportunity for discussion. What was unexplained to my mind, however, was the fact that Dr. Bell had not read the medical notes before the caesarean operation commenced or before she telephoned her consultant at 01.36. That would have alerted her to the true nature of Hamish's condition. The purpose of the notes is to record what was happening to the patient so that all involved in her care had knowledge of that. If Dr. Bell had read them Dr. Higgs would have attended and been responsible, from the moment of Hamish's delivery, for his resuscitation. There was quite a bit of cross-examination and discussion at the Inquiry about whether Dr. Higgs should have attended immediately in any event. It would not have been an unreasonable decision for her to have done so. I accept, however, that she had to balance other possible calls on her and was entitled to take account of the training and experience which Dr. Bell had. She asked to be kept informed and, of course, did come when the true position was made clear to her.
- Might it have made any difference if Dr. Higgs had attended for the delivery? Hamish had no heart beat when he was born. He was unable to breath. What

Dr. Bell did was to clear his air passage and attempt to resuscitate him by ventilating his lungs with a T piece or bag and mask. This was unsuccessful in reviving him. The alternative method of ventilation was intubation of his lungs. This is a more difficult procedure and one which a paediatrician of Dr. Bell's experience would not normally have carried out; in contrast to Dr. Higgs. In fact this had happened before Dr. Higg's arrival when Dr. Livingstone went over to the resusitaire to assist Dr. Bell and intubated Hamish. Again this was unsuccessful in stimulating spontaneous breathing. When Dr. Higgs arrived she intubated again and applied heart massage. She injected Hamish with a stimulant to attempt to start his heart. Eventually a heart beat was established but Hamish did not breath spontaneously. He never did and throughout his short life his breathing was entirely supported by artificial means; whether the T piece, the bag and mask or the intubation or, later, in a ventilator in the Special Care Bay Unit where he was taken by Dr. Higgs. I accepted the evidence of Dr. Higgs that, in Hamish's situation, ventilation by bag and mask was likely to be as effective as intubation. There was no evidence that what Dr. Bell did to ventilate in this manner was other than appropriate. Intubation was carried out by Dr. Livingstone shortly after the birth. That is a technique well known to anaesthetists. There was no suggestion that it had not been carried out properly. I felt that the re-intubation by Dr. Higgs was appropriate in the sense that she was quite properly repeating a procedure herself which had hitherto not had the desired effect. So I do not think it is likely that her presence at the birth or immediate intubation might have avoided Hamish's death. Appropriate means of resuscitation were attempted. The reality seems to be that his condition was beyond that.

- Again there were difficulties in reconciling all the evidence I heard about when Dr. Higgs actually arrived at Cresswell. For the reasons I have just discussed I do not feel that an earlier arrival would have altered the outcome but, because it was the subject of considerable cross- examination, I will deal with it. The BT records show that there were three calls to Dr. Higgs. One at 01.23 related to another patient. At 01.36 Dr. Bell advised her of Hamish's condition - that was, of course, what she thought was the recovering bradycardia. Dr. Higgs asked to be phoned back after the delivery. That happened at 01.47 (almost immediately after Hamish's delivery at 01.46). When she learned of Hamish's true condition she said that she went immediately to Cresswell. The likely time for that journey is established by Mr Anderson's affidavit and is less than two minutes. Dr. Higg's estimate of her travel time is consistent with that. It is also consistent with the evidence of the time on the resusitaire clock (3 minutes) which should always be started whenever a baby is born. The time from birth has significance in relation to measurements and observations for the "Apgar Score" to show the child's condition and progress. It did not accord, however with the evidence of Mr. Adamson or Dr. Livingstone. I think it is probable that Mr. Adamson is mistaken about when he thinks he saw Dr. Higg's arrive and that Dr. Livingstone's recollection of the gap between the time she went to help Dr. Bell and Dr. Higgs' arrival is understandably distorted by what must have been an anxious and worrying realisation that all was not well with Hamish. In any event, even if Dr. Higgs had taken longer than she thought to arrive there was no failure to contact her immediately. While Dr. Bell can be criticised for not reading the notes or it could be said that Dr. Higgs might very reasonably have gone to be with her

junior colleague at the delivery it is not established as likely that this might have avoided Hamish's death.

Reasonable precautions whereby Hamish's death might have been avoided and defects in any system of working which contributed to his death

- The precautions which I identify in my determination might all have avoided Hamish's death because they would have allowed earlier detection of his condition and the start of the caesarean section operation before 01.30. That is not to say that he would have been born without brain damage. But the issue in the Inquiry is his death and not any diminished quality of life which he may have had. The latter raises a whole range of difficult issues which are outwith the scope of the 1976 Act. It is important to remember that the test to be applied is whether any precaution might have avoided the death; not whether the death would have been avoided, a higher standard. In fact both Mr. Martin and Mrs. Davie submitted that the higher standard had been established on the evidence. And, of course, it is only "reasonable" precautions with which the Inquiry is concerned. The impossible or something highly unusual is not required.
- There is no dispute that an operation before 01.30 might have prevented Hamish's death. Nor that earlier detection of the onset of labour should have instituted the CTG monitoring which would have detected the distress of the foetus. The balance of the evidence pointed to the onset of labour as 23.40 or earlier. Professor Hillan thought by 22.00 or 22.20. Professor Robson thought this was very clear at 12 midnight and potentially at 23.40 and possibly at 22.20. Julia McQueen seemed to accept that labour was initiated between 22.20 and 00.20. Looking at her evidence in the round it does not wholly exclude the views formed by Professor Hillan and, by implication, Professor Robson or, of course, Sister Featherstone about an earlier start. These views were largely based on the medical notes. When the evidence of Mrs. Adamson about her pain at 23.40 is taken account of I prefer the view of Professor Hillan, Professor Robson and Sister Featherstone. In these circumstances it would have been reasonable for Karen Hastings to have diagnosed the labour earlier and for the monitoring to have commenced at least as early as 23.40. As the policy at Cresswell at the time was for continuous CTG monitoring once labour commenced that certainly might and probably would have avoided Hamish's death.
- In fairness to Karen Hastings the possibility of diagnosing the labour was probably not a live one until 23.40. Between 22.20 and 23.40 there was no monitoring of Mrs. Adamson of any sort at all. She was in her bath in ignorance of the fact that her supervising midwife had changed. Clearly if the CTG monitoring had continued in her room there may have been a chance that someone would have checked her. That period (22.20 to 23.40) seems most appropriately to be a system defect through lack of available staff.
- The issue of whether it would have been reasonable not to discontinue the monitoring at 22.20 is more difficult. Alison Rogerson seems to have been following what she understood the policy to be. So although the continuation of monitoring at that stage is a precaution which might have prevented Hamish's death it was more a defect in the system of working than an error of judgment on her part.

- The same is true, to some extent, of the failure to commence the caesarean operation earlier. This was a consequence of the discontinuation of CTG monitoring, the failure to diagnose the labour earlier and the failure to re-institute the monitoring whether in the unit or by transfer to the labour ward. But it depended to some extent at least on the unexplained delays I have already discussed. That too related not primarily to the individuals involved but to a lack of system for the sort of immediate emergency operation Mrs. Adamson required.
- Dr. Gordon's evidence was the most compelling about when the induction should or should not have commenced. He was clear about the purpose of early admission. He was clear about the preference not to commence after about 15.00 unless the patient was asked. In fact he said that he would have postponed the induction if he had been asked. There is nothing in the evidence to suggest that the other staff at Cresswell looked at the issue in the same way. There appear to be no guidelines about what to do. There seems to be no need for consultant involvement in individual cases. The matter should be made clear so that staff can properly assess whether to start or continue with any induction and the circumstances in which medical or consultant approval or advice should be sought; and to enable patients to reach an informed view where that is important.
- The present policy for CTG monitoring is as I already discussed - 30 minutes before the administration of the prostaglandin gel and one hour thereafter. That is to be found in the guidelines - "Management of Induction of Labour". Beyond that it should be recommenced when the mother is in established labour. That is the policy as explained by Dr. Gordon and Dr. Mensah. There is no reference to that in either of the guideline documents at Cresswell. It is perhaps not surprising, therefore that there seemed to be some confusion about it; particularly as was apparent from the voluminous evidence on the point that the criterion of established labour is highly subjective. There is reference in "Guidelines Care in Labour" to various criteria for continuous CTG. The one which might seem to apply to Mrs. Adamson was "Bad obstetric history". The meaning of that term too was exhaustively canvassed over several days and was the subject of different interpretation. There is no adequate reference in "Guidelines Care in Labour" to the risk of hyperstimulation to a mother who has had a previous caesarean section following the application of prostaglandin gel. There is no mention of the possible significance of a trial of labour. There is no proper discussion of categories of patients who may be at higher risk from prostaglandin gel than others. These are not matters which arose for the first time at the Inquiry. However they may have disagreed about aspects of them or about the usefulness of some of the terms Drs Gordon and Mensah, Professors Robson and Hillan and Julia McQueen were aware of them and discussed them extensively during evidence. They are issues which should have been addressed in guidelines for staff even if only to discount them and help staff to understand what is of significance in a trial of labour induced by prostaglandin gel. I fear I may be guilty of understatement by expressing only my surprise that the guidelines in place at Hamish's death remain unaltered and do not appear to reflect the change in procedure to monitor mothers like Mrs. Adamson continuously by CTG in the labour ward.
- I have already described the guidelines about the timetable for a caesarean operation occasioned by prolonged bradycardia as worthless. It is disturbing that

they too remain unaltered. Clearly the present split site of Cresswell and the Infirmary poses a situation regarding the attendance of anaesthetists at Cresswell which is not ideal. But then life rarely is. If anything that fact should have made more apparent the need for a realistic and generally attainable timescale for such an operation. That requires a clear understanding of how urgent the operation was. The evidence demonstrated that all caesarean sections which occur during labour are regarded as "emergencies". That distinguishes them from the sort of elective caesarean which I have found was discussed with Mrs. Adamson by Dr. Mensah on 15 September. But there is a further important distinction between caesareans carried out because labour has been attempted but is going on longer than the mother feels able to bear; and those where there is an immediate risk to the foetus or to the mother. That distinction does not appear to be reflected in the Royal Colleges document or in the statistics of times for caesarean sections in Scotland in 1994. That may distort the significance of the average times. (I did not hear sufficient evidence to draw that conclusion.) But that would not detract from the need to have the fastest possible time for the performance of those caesareans where the risk to mother or foetus is greatest. Calling them "immediate" or some other distinguishing term would perhaps be a start. No structured attempt appears to have been made by those responsible for the supervision of medical or nursing care to find out what was practicable, to set that out clearly for the guidance of staff and to monitor whether it was being met or could be improved. The clearest example of that failure is in the delay in making contact with Dr. Livingstone. The general vagueness about how long the preparatory part of each member of the operative team took is another, although, given the state of the evidence it is difficult to see the picture clearly there. The need for co-ordination of the preparations and clear responsibility for that is the one definite conclusion I can draw. As a matter of urgency a "fire drill" to assess the component parts of the preparation and their individual and relative timescales would allow further conclusions to be drawn, guidelines to be issued and a framework for monitoring performance established.

- The issue of whether there was a shortage of staff at Cresswell on 17 and 18 September is not easy. One member of the red team did not come in for duty at 21.30. The hospital appears to have been busy but my impression of the evidence was that, apart from Mrs. Adamson, there seemed to be no particular emergency which caused that. Mrs. Thorpe, who was ultimately responsible for the midwifery staffing, denied that there was a shortage. She quoted statistics from apparently comparable hospitals. But the time of Mrs. Adamson's stay in Cresswell is a catalogue of things not happening because no one was available or there was a delay before they arrived. The preparations for her induction were started and then stopped in the morning. Alison Rogerson left her, apparently without time to let her know. (If she had not gone it seems that there would have been no one in the labour ward to care for the patient she went to). Karen Hastings did not seem to have the time to see her before 23.40 when she met her by chance. There was no one available in the labour ward after labour was finally diagnosed. Karen Hastings was unable to leave unit C with Mrs. Adamson because there was no other midwife to take charge of it. No one seems to have had time to recommence CTG monitoring when the transfer to the labour ward was delayed. Marcia Thomson could not come immediately because she was busy. The induction of Mrs. Rippingale, who had come in that

day as planned, did not continue because Mrs. Adamson's was given priority. While I accept that the "one to one" care cannot always, during a shift, guarantee care by the same midwife, the five changes Mrs. Adamson endured during sixteen hours or so points to a lack of staff rather than a sufficiency. Likewise the unrealised intention of the "team system", to which I will refer, points in the same direction. What can be said is that it appears that if there had been more midwifery staff on duty Hamish might not have died. It is unlikely Mrs. Adamson would have been completely unmonitored between 22.20 and 23.40. It is likely that her transfer to the labour ward would have taken place much sooner than it did. It is possible that Karen Hastings would have had more time to diagnose labour earlier. For these reasons I do not use the word "shortage" in the context of staff but restrict what I say to "sufficient". That is what the evidence seems to suggest.

Other facts which are relevant to the circumstances of Hamish's death

- Use of the 3333 emergency number would not have avoided Hamish's death but it would certainly have provided a better audit trail of what actually happened. It might also have better focused the emergency nature of the operation. There was no reason not to use it. That should be done in future.
- The fault in the Cresswell telephone system was unfortunate but was not detected for understandable reasons. Unfortunate also was the destruction of the main hospital logging records. Joan Brown is not to be criticised for destroying her notes but there is no reason why such records - perhaps, as in Mrs. Adamson's case, with a potential future significance as great as the timed medical notes - should not be retained for a reasonable period.
- Not long before Hamish's death the midwifery system at Cresswell had been changed to operate in colour coded teams. Each team was responsible for a number of GP practices and provided midwifery care from early pregnancy until and after delivery. That seemed to have a laudable purpose - continuity of care of mothers by and familiarity with the same team of staff. That did not work for Mrs. Adamson. In Cresswell she was cared for by red, blue and orange team members. I did not gain the impression that she was previously familiar with any of them. The operation of the "team system" should be reviewed to see if it is meeting its aims.
- The question of cover for absent staff was very odd. Mrs. Thorpe was the last of the midwifery staff to give evidence. Other staff had been asked about such cover but almost all knew of no arrangements apart from the possibility that a few nursing staff - whether Cresswell staff or other nursing staff with midwifery experience was not clear to me - who might be available to do an extra shift. Apart from Karen Hastings there was no mention of any system of a supervisory midwife being on call who could have come out. In fairness, no one was asked specifically about such a supervisory midwife but several of the midwife witnesses were questioned on the topic of staff cover. If such a system had been known it is unlikely, if not incredible, that they would not have mentioned it. Mrs. Thorpe told me about it; and that, in fact, it was she who was the supervisory midwife on call that night. It is a pity that appears not to have been generally known about. Perhaps she could have been called upon although her evidence was that, while she was registered for practice as a midwife, she had not been in active practice for five years. I have no basis whatsoever to doubt

her professional competence. The question of her staff actually calling on her was, unfortunately, left unexplored. This area requires review and greater information for staff.

- I have referred to the Wednesday meetings and other arrangements for dissemination of information at Cresswell. They seemed very informal and unstructured to me. Whether a particular member of staff learned of any change in policy or guidelines appeared to depend on attendance at such meetings. That could be affected by shifts, holidays or illness. No minutes appear to be kept. There is no system of staff confirming receipt of a copy of any guideline document. Such a system should be instigated.
- The fact that direct contact with a dissatisfied patient by the medical or nursing staff stops if it is known that legal advice has been sought emerged briefly but, it seems, definitely in the evidence. I did not have the benefit of much discussion of this issue but my impression was that, if true, it did not help the Adamsons to come to terms with what had happened. There may be good reasons for this. They should be looked at again.
- The final letter from Dr. Mensah to Mr. and Mrs. Adamson sought to address their concerns and offered an opportunity for discussion which took place. Dr. Mensah knew that the Adamsons were contemplating legal action. They seem, however, to have been unaware of the formal complaints procedure which was available through Mr. Jamieson, the Director of Quality Assurance. That left unexplored an avenue for their dissatisfaction. The information I received (in part from Miss Robertson) was that the hospital was "plastered" with notices about this and various patient leaflets refer to it. In a situation such as that of Mr. and Mrs. Adamson the existence of the complaints procedure may be overlooked or unknown where informal inquiries and answers are made and given. At or towards the end of a correspondence such as they had with Dr. Mensah it would have been better to have been reminded them of it.
- The failure to conduct any proper internal inquiry into Hamish's death after the event would not have prevented it but I found it very disturbing that none had been carried out. There were specific questions raised about the call to Dr. Livingstone which caused Mrs. Thorpe to raise the matter with Mr. Gault the Chief Executive of the Trust. The missing records would then have been available. The matter does not seem to have been followed through. Mr. and Mrs. Adamson had a long list of detailed questions for Dr. Mensah and Dr. Higgs at their meeting. That raised, in some form at least, many of the issues covered at the Inquiry. Both Dr. Mensah and Dr. Higgs had a poor recollection of what questions were asked and could not really remember. I believe that the Adamsons did ask their questions. I do not think that Dr. Mensah's letter to Mrs. Thorpe after the meeting fairly reflects all their concerns which should have alerted him and the other senior medical staff in post in October 1998 to the need for a more structured review of what had happened. Likewise it is very difficult to understand why Mrs. Thorpe did not appreciate that need. She had, of course, felt the need to raise one matter with the Chief Executive. She said that she had reviewed the case notes. She must therefore have seen Sister Featherstone's assessment of when labour was established. That should have raised a question in her mind about when CTG monitoring was re-instituted. She accepted that insufficient efforts were made to deal with the staffing difficulty. She said that was in retrospect. But, of course, that was precisely her viewpoint when she was considering what had happened that night. As she was,

according to her, the supervising midwife available for call it seems strange that it never crossed her mind as to why she was not called upon. Both Professor Hillan and Professor Robson reviewed the medical notes retrospectively. Both were critical of aspects of Mrs. Adamson's care. Although he did not give evidence Dr. Lang's report is also critical to some extent. Whether or not these criticisms are correct they demonstrate that questions for consideration existed. An inquiry of some sort with a record of its conclusions should have been undertaken.

Conclusion

- The fact that Hamish did not long survive his delivery is a tragedy; not only for his parents but also for those who were, at various stages, involved in his care and that of Mrs. Adamson. I would wish to repeat what I said at the conclusion of the Inquiry and express my sorrow and sympathy to Mr. and Mrs. Adamson. To lose a child at the very start of life, is difficult to bear and impossible to forget. When that happens in circumstances where it might have been avoided (as I have discussed in this Determination) it must be particularly hard. I hope that the subsequent birth of their son has brought them some comfort and faith for the future.
- At the conclusion of her submissions I asked Miss Robertson whether the position of her clients, the Trust, remained that there was no finding which I could make in terms of Sections 6(1)(c) or (d) of the 1976 Act that there was any reasonable precaution which **might** have prevented Hamish's death or any system defect which contributed to it. Her answer was, and I quite appreciate that she would be acting on instructions, that there was not. I have to record that, in my view, this position is untenable. The evidence over many days indicated otherwise. The Procurator Fiscal Depute, who acts for the public interest and not for the Adamson family or any other private party, submitted, in my view with considerable fairness and responsibility, that there were reasonable precautions some of which **would** have prevented the death. That goes further and imposes a higher standard than the 1976 Act requires.
- This was an Inquiry where the procedures and practices at Cresswell were examined. Of course, wider issues loomed large but in the context of what was or was not done at Cresswell. My recommendations lie heavily in the direction of Cresswell reviewing their procedures in the area which was the focus of the Inquiry - a trial of labour by induction by prostaglandin gel by a woman who has previously undergone a caesarean section operation. It is for the management of the Trust to balance all the various aspects which were the subject of evidence, which I have discussed and which I have tried to focus in my recommendations and to take steps to try and ensure that what happened is not repeated. It was disturbing and unacceptable that Dr. Mensah, the senior obstetrician currently in post at Cresswell who gave evidence, had to admit to Mr. Martin in re-examination that, notwithstanding Hamish's death and his letter to Mr. and Mrs. Adamson, changes in practice for the induction of women who have had a previous caesarean section are even now not covered by guidelines; and that the apparently unattainable 15 minute timescale for an emergency caesarean operation remains unaltered.
- I have no alternative but to criticise the failure of the Trust, but particularly Mrs. Thorpe, as the senior manager in charge of midwifery services, to investigate

adequately the circumstances of Hamish's death. If they had done so and relayed their conclusions to the Adamsons the Fatal Accident Inquiry might well not have been necessary. That was the view expressed by the Fiscal. It is one which I share. It is disappointing that the Trust has been unable publicly to identify or confirm even one aspect of the actings of their employees or their systems which might have prevented Hamish's death. If that attitude persists I fear that they can anticipate future occasions when they will risk subjecting their staff to the form of intensive and very public scrutiny which was clearly uncomfortable and upsetting to many of the medical and midwifery witnesses who appeared at the Fatal Accident Inquiry.

- **APPENDIX 1**

Witness who gave evidence at the Inquiry

- Caroline Adamson, Hamish's mother
- Nicholl Adamson, Hamish's father
- Eleanor Brodie, Health Visitor at the Sanquhar medical practice
- Dr. George Gordon, Consultant Obstetrician and Gynaecologist at Cresswell in 1998 and, until the end of September 1998, Director of Medical Services at Cresswell
- Lynda Tweddle, Midwife and Outpatient Services Manager at Cresswell
- Janice Gourlay, Midwife at Cresswell
- Catherine Creggan, Staff Nurse at Cresswell
- Roberta McKean, Midwife at Cresswell
- Jacqueline Carroll, Midwife at Cresswell
- Alison Rogerson, Midwife at Cresswell
- Karen Hastings, Midwife at Cresswell
- Dr. John Clyde, Senior House Officer at Cresswell in September 1998
- Margaret Anderson, Midwife at Cresswell
- Margaret Thomson, Staff Nurse at Cresswell in September 1998
- Marcia Thomson, Midwife at Cresswell
- Dr. Camille Nicholls, Registrar in Obstetrics and Gynaecology at Cresswell in September 1998
- Dr. Susan Livingstone, Anaesthetist with the Trust in September 1998
- Susan Stones, Anaesthetic Nurse with the Trust
- Dr. Marietta Higgs, Consultant Paediatrician with the Trust
- Dr. Paul Mensah, Consultant Obstetrician and Gynaecologist at Cresswell
- Dr. Joan Keiling, Consultant Paediatric Pathologist in the Department of Pathology in the Royal Hospital for Sick Children in Edinburgh
- Professor Steven Robson, Consultant Obstetrician and Gynaecologist at the Royal Victoria Infirmary, Newcastle upon Tyne and Professor of Foetal Medicine at the University of Newcastle
- Joan Featherstone, Midwife and Labour Ward Sister at Cresswell
- Jacqueline Bell, Senior House Officer in Paediatrics with the Trust in September 1998
- Brenda Thorpe, Director of Midwifery Services at Cresswell
- Julia McQueen, Midwife and Supervisor of Midwives at Glasgow Royal Infirmary
- Professor Edith Hillan, Midwife and Professor of Midwifery at the University of Glasgow.

Affidavits were produced from the following witnesses who did not give oral evidence:

- Dr. Awni Lutfy, Consultant Pathologist at Dumfries and Galloway royal Infirmary
- Michael Pratt, Principal Pharmacist at Dumfries and Galloway Royal Infirmary
- Mary McInally, Midwife and Nursing Sister at Cresswell
- Acting Detective Chief Inspector Brian Anderson, Dumfries and Galloway Constabulary
- Lorna McGowan, Midwife at Cresswell
- William Crombie, Medical Physics Technician at Dumfries and Galloway Royal Infirmary
- Joan Brown, Telephonist at Dumfries and Galloway Royal Infirmary

APPENDIX 2