INQUIRY HELD UNDER FATAL ACCIDENTS AND SUDDEN DEATHS INTO THE DEATH OF SARAH ANNE MACKINNON

SHERIFFDOM OF GLASGOW AND STRATHKELVIN AT GLASGOW

INQUIRY HELD UNDER FATAL ACCIDENTS AND SUDDEN DEATHS INQUIRY (SCOTLAND) ACT 1976

SECTION 1(1)(a)

SECTION 1(1)(b)

DETERMINATION by SAMUEL CATHCART, Esquire, Advocate, Sheriff of the Sheriffdom of Glasgow and Strathkelvin following an Inquiry held at Glasgow on the 17th, 18th, 19th and 20th days of December Two Thousand and Two, 10th, 11th, 12th, 17th, 18th and 19th days of February and 1st and 2nd days of May both Two Thousand and Three into the death of SARAH ANNE MacKINNON.

GLASGOW, June 2003.

The Sheriff, having considered all the evidence adduced, DETERMINES:

in terms of the Fatal Accidents and Sudden Deaths Inquiry (Scotland) Act 1976 Section 6(1):

(a)That Sarah Anne MacKinnon, aged 34 years, who resided at 1320 Paisley Road West, Glasgow, died at the Southern General Hospital, Glasgow at 2345 hours on 4 May 2000.

(b)That the cause of her death was

1(a) Shock, due to

(b) Chemical Peritonitis, due to

(c) Gastric Perforation, due to

(d) Gastric Dilatation

(c)That the creation of a system which ensured adequate communication between the surgeon who carried out the partial fundoplication operation on Sarah Anne MacKinnon at the Southern General Hospital, Glasgow on 29 May 2000 and the physicians responsible for her post-operative care at the Western Infirmary, Glasgow, was a reasonable precaution whereby her death might have been avoided.

(d)That the system of working created to provide post-operative care for Sarah Anne MacKinnon, whereby her care was to be shared by the surgeon who carried out the partial fundoplication operation at the Southern General Hospital, Glasgow on 29 March 2000 and the physicians at the Western Infirmary, Glasgow, was defective in that it failed to ensure that there was adequate communication between the surgeon and physicians, and that said defect contributed to her death.

(e)That:-

(1)Sarah Anne MacKinnon was born on 3 March 1966. At the time of her death she resided with her mother at 1320 Paisley Road West, Glasgow. She was the youngest of 3 children, having an older sister, Mary Margaret MacKinnon and a brother Ian MacKinnon.

(2)From an early age Sarah Anne MacKinnon suffered health problems. At first these related to vomiting, but by 1980 impairment of her kidney function was identified and she was admitted to the Western Infirmary, Glasgow.

(3)At that time she underwent surgery relating to her colon and had a hysterectomy. From then on she remained under the care of the renal physicians at the Western Infirmary.

(4)Sarah's renal impairment progressed to such an extent that by 1994 she required and had started renal dialysis at the Renal Unit of the Western Infirmary. This unit has dialysis facilities both at the Western Infirmary, Glasgow and also at Gartnavel Hospital, Glasgow. The outpatient Renal Unit is located at Gartnavel Hospital and the inpatient Renal Unit is within the Western Infirmary.

(5)Sarah attended on a regular basis for dialysis and by 1999 was attending 3 times a week. The consultant at the Renal Unit in charge of Sarah's care was Dr Stuart Rodger.

(6)Sarah also had cardiac problems.

(7)In about 1995 Sarah started to have difficulty swallowing due to a stricture, a narrowing of the lower gullet.

(8)In 1996 she was referred to Mr John Anderson, Consultant Surgeon at the Southern General Hospital in relation to the swallowing difficulty. She attended Mr Anderson on a regular basis thereafter, as he attempted to resolve the problem. She continued to attend the Western Infirmary and Gartnavel Hospital for dialysis.

(9)Mr Anderson, a consultant at the general hospital since 1994 had a particular interest and expertise in gastrointestinal surgery.

(10)By stretching the gullet, Mr Anderson tried to resolve the problem. This was initially successful but did not resolve the problem as the stricture recurred.

(11)The cause of Sarah's difficulty was gastro-oesophageal reflux which is the reflux of acid and other stomach contents from the stomach into the lower oesophagus. This, in turn, caused inflammation in the lower oesophagus, with superficial ulceration. This healed leaving scar tissue which caused the lower end of the gullet to narrow. The effect of this was to cause Sarah discomfort, as there was irritation of the lower gullet.

(12)Sarah's quality of life was affected by this swallowing problem. She suffered heartburn, vomiting, occasional chest pain and upper abdominal pain. A variety of medicines did not remove her symptoms.

(13)In 1999 surgery was suggested as a possible solution.

(14)During the latter part of 1999 Sarah discussed the possibility of undergoing surgery for her reflux problem which was making her life miserable, with Mr Anderson, her General Practitioner, Dr Kenneth Francis O'Neill and members of her family.

(15)Sarah had a good relationship with both Mr Anderson and Dr O'Neill.

(16)She was made aware of the risk involved in the proposed major surgery and of the long-term problems associated with the operation.

(17)Mr Anderson recommended that if Sarah wished to undergo surgery, he would carry out an anti-reflux operation known as partial fundoplication. In this type of operation the upper stomach is wrapped around a portion of the lower gullet and stitched to it.

(18)It was explained to Sarah that the operation would be open surgery carried out at the Southern General Hospital by Mr Anderson.

(19)As there were no haemodialysis facilities at the Southern General Hospital and as Mr Anderson considered it inappropriate, for a variety of reasons, to carry out the operation at the Western Infirmary, it was agreed between Mr Anderson and the physicians at the Renal

Unit of the Western Infirmary that Sarah would undergo the operation at the Southern General Hospital and be transferred to the Western Infirmary Renal Unit the day after the operation where she would remain as an inpatient for her post-operative care. This would enable Sarah to receive dialysis.

(20)Sarah trusted and had a bond with Mr Anderson. She did not wish any other surgeon to perform the operation.

(21)It was agreed between Mr Anderson and the physicians at the Renal Unit of the Western Infirmary that Sarah's post-operative care would be managed jointly by Mr Anderson and the Western Infirmary physicians while she was an inpatient there.

(22)Mr Anderson intended to attend Sarah at the Western Infirmary every 2 or 3 days until she was discharged.

(23)On 29 March 2000 Sarah underwent the partial fundoplication operation carried out by Mr Anderson.

(24)In surgical terms the operation was successful.

(25)On 30 March 2000, as planned, Sarah was transferred from the Southern General Hospital to the Western Infirmary Renal Unit.

(26)She remained an inpatient there until discharged on 17 April 2000.

(27)A partial fundoplication operation is a major operation. Complications can and do arise following this operation.

(28)One such complication is abdominal distension, which is amenable to treatment, either by medication and/or insertion of a naso-gastric tube for a lengthy period or by revisionary surgery.

(29)Mr Anderson was aware that abdominal distension was a potential complication. He was also aware of the treatment necessary to alleviate the condition.

(30)In the inpatient Renal Unit at the Western Infirmary there is a team of consultants who take it in turn to supervise the care of patients in the 2 wards.

(31)Between 30 March 2000 and 17 April 2000, 3 consultants, Dr Briggs, Dr Margaret McMillan and Dr Junor looked after Sarah Anne MacKinnon within the Renal Unit.

(32)The consultant responsible for her care on any particular day depended upon a rota system.

(33)Dr Rodger was her named dialysis consultant.

(34)It was common for a patient who had had surgery outwith the Western Infirmary to be transferred to this infirmary for dialysis, although it was unusual for such surgery to be elective.

(35)In and around March and April 2000 Dr Briggs was not aware of the main complications which can arise as a result of partial fundoplication.

(36)On arrival at the Western Infirmary on 30 March 2000 Sarah Anne MacKinnon was very drowsy due to her reaction, as a kidney failure patient, to morphine administered at the Southern General Hospital. Her condition was recognised and dealt with appropriately.

(37)Sarah Anne MacKinnon was in pain from her admission to the Western Infirmary on 30 March 2000 until her discharge on 17 April 2000. She complained to the medical staff about the pain.

(38)On 7 April 2000 an x-ray examination revealed that Sarah had a "huge dilated stomach".

(39)On 10 April 2000 an ultra-sound scan revealed that Sarah had "gross gastric dilatation with flared residue".

(40)A CT scan carried out on 11 April 2000 revealed inter alia "extensive gastric dilatation".

(41)On 31 March 2000 Sarah Anne MacKinnon was seen by Mr Anderson at the Western Infirmary. Her abdomen was soft and he found no distension other than that to be expected from surgery.

(42)Mr Anderson saw Sarah Anne MacKinnon again on 1 April 2000 when, although she complained of pain, he found her condition to be satisfactory.

(43)He visited her again on 3 April 2000 when he was pleased with her progress. He examined her stomach and everything appeared to be in order.

(44)He visited her again on 5 April 2000 when he was made aware that she had collapsed in the toilet on 4 April 2000. At this visit Mr Anderson thought that Sarah was "fine".

(45)He visited her again on 7 April 2000 and did not note any particular distension.

(46)He visited her again on 10 April 2000. On this occasion he was told that a naso-gastric tube had been passed, that there was minimal aspirate from the stomach and that the tube had been withdrawn. When he examined Sarah he found no clinical cause for concern. Sarah still complained of pain.

(47)On 10 April 2000 Mr Anderson was made aware that an x-ray had been carried out. He was not made aware of the result of that. He was aware that an ultra-sound scan had been carried out but not of the result of that.

(48)As a surgeon it was Mr Anderson's practice to order an ultra-sound scan to be carried out on a patient who had clinical evidence of an abscess or collection. In his view there was no clinical evidence that Sarah Anne MacKinnon was developing any kind of intra-abdominal abscess or collection on 10 April 2000.

(49)Mr Anderson did not request the ultra-sound scan on 10 April 2000.

(50)On 10 April 2000 Mr Anderson did not think that there was anything surgically wrong with Sarah.

(51)At none of his visits to see Sarah did Mr Anderson consult with any of the Western Infirmary medical staff.

(52)Mr Anderson did not see Sarah alive after 10 April 2000.

(53)He contacted the Western Infirmary on 17 April 2000 to be told that Sarah was being discharged home.

(54)Mr Anderson was not involved in the decision to discharge Sarah.

(55)It was Mr Anderson's clinical impression that Sarah was not developing any significant post-operative complications.

(56)Had Mr Anderson been aware of the x-ray and scan results and other information available to the physicians at the Western Infirmary, he would not have discharged Sarah Anne MacKinnon.

(57)Throughout her stay in the Western Infirmary between 30 March 2000 and 17 April 2000 Sarah Anne MacKinnon received a variety of painkillers up to and at discharge.

(58)The physicians at the Western Infirmary were of the view that any complication experienced by Sarah Anne MacKinnon was a surgical matter and therefore one for Mr Anderson to deal with.

(59)On 17 April 2000 Dr Briggs discharged Sarah Anne MacKinnon from the Western Infirmary. At the time of discharge Dr Briggs was aware of the results of the x-ray and scans.

(60)When he discharged Sarah Anne MacKinnon, Dr Briggs was not aware of the main complications which can arise as a result of partial fundoplication.

(61)No discharge letter was sent by Dr Briggs to Sarah Anne MacKinnon's general practitioner or to Mr Anderson.

(62)Following her discharge Sarah Anne MacKinnon continued to attend the Renal Unit of the Western Infirmary for dialysis every Monday, Wednesday and Friday.

(63)During this time she continued to complain to both medical and nursing staff of pain and discomfort because of the gross distension of her abdomen.

(64)On 21 April 2000 Dr Henderson, a senior house officer within the Renal Unit instructed a further x-ray of Sarah Anne MacKinnon's abdomen. This x-ray disclosed "quite marked distension of the stomach with large fluid level within it."

(65)On one occasion between 21 and 26 April 2000 Dr Henderson telephoned Mr Anderson's unit at the Southern General Hospital. Dr Henderson explained to a Registrar, not identified, his interpretation of the x-ray examination. Dr Henderson was reassured by the registrar and did nothing further to deal with the abdominal distension.

(66)Up until 4 May 2000 Sarah Anne MacKinnon continued to suffer pain.

(67)On 4 May 2000 Sarah attended Dr Dominiczak at the Western Infirmary Glasgow in connection with a thyroid problem. She did not make any complaint of pain to Dr Dominiczak.

(68)On 4 May 2000 Sarah Anne MacKinnon's condition deteriorated while she was at home with her mother at 1320 Paisley Road West, Glasgow.

(69)At about 6.45 pm Dr Herron of the Glasgow Emergency Medical Service attended Sarah Anne MacKinnon at her home. He formed the view that she may have peritonitis.

(70)He contacted the Southern General Hospital and arranged for her to be admitted as an emergency.

(71)Sarah Anne MacKinnon was taken by ambulance to the Southern General Hospital, Glasgow where on admission she was found to be moribund. She had a systolic blood pressure of 80 a tachycardia of 130, was acidotic and peripherally shut down.

(72)A decision was taken that Sarah Anne MacKinnon would be taken to theatre for surgery. She arrested and died before this could take place.

(73)Her life was pronounced extinct at 2345 hours on 4 May 2000 at the Southern General Hospital, Glasgow.

NOTE:-

This Fatal Accident Inquiry was instructed into the circumstances of the death of Sarah Anne MacKinnon in terms of Section 1(1)(b) of the Fatal Accident Accidents and Sudden Deaths Inquiry (Scotland) 1976 on the grounds that it appeared to the Lord Advocate that the holding of such an Inquiry would be in the public interest on the grounds that the death had occurred in circumstances such as to give rise to serious public concern.

During the course of the Inquiry the Procurator Fiscal Depute called the following witnesses:-

(1)Mary Margaret MacKinnon, 69 Rodger Avenue, Glasgow.

(2)Dr Craig Peter Charles Dick, Western Infirmary, Glasgow.

(3)Dr Richard Morton, Southern General Hospital, Glasgow.

(4)Margaret McLucas, North Glasgow University Hospitals NHS Trust.

(5)Dr John Anderson, Southern General Hospital, Glasgow.

(6)Dr John James Herron, Govan Health Centre, Glasgow.

(7)Dr Andrew David Henderson, Ninewells Hospital, Dundee.

(8)Dr James Douglas Briggs, Western Infirmary, Glasgow.

(9)Dr Stuart Rodger, Western Infirmary, Glasgow.

(10)Dr Kenneth Francis O'Neill, Midlock Street, Ibrox.

(11)Professor Anna Felizia Dominiczak, Western Infirmary, Glasgow.

(12)Professor Zigmund Henderson Krukowski, Aberdeen Royal Infirmary.

An affidavit by Dr Thomas George Dryden Miller was tendered and accepted as evidence in terms of Rule 10 of the Fatal Accident and Sudden Deaths Inquiry Procedure (Scotland) Rules 1977.

At the Inquiry:-

Mr D McCaffrey appeared on behalf of Sarah MacKinnon's family.

Mr D Holmes appeared on behalf of Mr John Anderson.

Mrs L E Kennedy appeared on behalf of South Glasgow University Hospitals NHS Trust.

Mr D W Jessiman appeared on behalf of Drs Briggs, Rodger and O'Neill and Professor Dominiczak.

Mr D A Stephenson, Advocate, appeared on behalf of North Glasgow University Hospitals NHS Trust.

Following the evidence led by the Crown no further evidence was led by Mr McCaffrey, Mr Holmes, Mrs Kennedy or Mr Jessiman.

Mr Stephenson called the following witnesses:-

(13)Barbara Anne Killoran, Western Infirmary, Glasgow.

(14)Dr Hugh Montgomery Gilmour, Royal Infirmary, Edinburgh.

I would like to express my sympathy and condolences to the MacKinnon family and, particularly, to Mary Margaret MacKinnon, who gave evidence at the Inquiry and also to those members of the family who remained in court throughout the Inquiry. I hope that this Inquiry has assisted them in coming to terms with their tragic loss.

Cause of Death

Evidence of the circumstances shortly prior to Sarah's death, at the time of her death and post-mortem was led, in particular, from Mary Margaret MacKinnon, Dr Herron, Drs Dick, Morton, Gilmour, Mr Anderson, Professor Krukowski and by affidavit evidence from Dr Miller.

Miss MacKinnon told the Inquiry that on the day of her death Sarah attended an endocrinologist, Dr Dominiczak, at the Western Infirmary, Glasgow in connection with her thyroid. Dr Dominiczak was not concerned with dialysis nor the partial fundoplication operation undergone by Sarah, nor the pain and discomfort consequent to that. It was Miss MacKinnon's evidence that as Sarah was aware of demarcation, she would have been very surprised if Sarah had mentioned her complaints to Dr Dominiczak. Miss MacKinnon gave evidence of an entry in Sarah's diary for 3 May 2000 which indicated that her tummy was gurgling with fluid and that she felt light-headed. It was recorded that at 10 pm her tummy was tight and huge and that she was very short of breath. On the day of Sarah's death Miss MacKinnon had been told by her mother that Sarah had not been feeling well and had pain coming in waves. By teatime Sarah was in a lot of pain. As the pain was getting much worse

and Sarah was becoming extremely distressed her mother telephoned the out of hours doctor. When he arrived he appeared very concerned and told Sarah's mother that he suspected septicaemia and that Sarah needed immediate admission to hospital. She was taken to hospital by ambulance.

Dr John James Herron, as part of the Glasgow Emergency Medical Services, was the doctor who attended Sarah on 4 May 2000. Dr Herron had no recollection of his attendance with Sarah but was able to give evidence by reference to notes he made at the time (Crown production No 15). Dr Herron had noted that Sarah had had abdominal pain since surgery and that she was "much worse today". She had been vomiting heavily and was a dialysis patient. On examining Sarah he found that her abdomen was rigid and that there was an absence of bowel sounds. According to Dr Herron, these findings were characteristic or clinically diagnostic of peritonitis. He administered Pethidine and arranged to have Sarah admitted to the surgeons at the Southern General. According to Dr Herron, Sarah was a surgical emergency. He explained that peritonitis is inflammation occurring outwith the bowel which usually results from infection in the peritoneal cavity, the space lying around the bowel internally, and usually results from perforation of a viscus or an organ usually in the gastrointestinal tract. He accepted that her condition could have resulted from a tear in the stomach. Were such a tear to happen, he explained that the contents would leak from the stomach giving rise to infection internally. The usual symptoms were abdominal pain, inability to move and the abdomen involuntarily becoming very rigid to protect the stomach from any movement and with that, the bowel function tends to seize. The bowel sounds stop because the bowel is paralysed. According to Dr Herron, Sarah was presenting with all the symptoms he described. He regarded peritonitis as potentially fatal. Dr Herron did not remain with Sarah until the ambulance arrived to convey her to the Southern General Hospital. He said that peritonitis can be progressive quite rapidly. Dr Herron's evidence was that a cause of death of gastric chemical peritonitis secondary to gastric perforation would be consistent with his findings. He agreed that shock is a common consequence of peritonitis. He did not remember Sarah's abdomen being distended although he did say that the abdominal rigidity would disappear at death. Dr Herron was asked about the terms of a letter dictated on 17 May 2000 by Mr Anderson to Sarah's GP (page 3 of the South Glasgow University Hospitals NHS Trust production). In the letter Mr Anderson records Sarah's condition on admission as an emergency on 4 May 2000. According to Dr Herron the findings indicate that Sarah had a degree of shock or cardio-vascular collapse which can be a consequence of peritonitis. Dr Herron left Sarah's house at 7.25 pm having arranged an ambulance.

In his affidavit Dr Miller stated that he was the Surgical Senior House Officer at the Southern General Hospital when Sarah was admitted on 4 May 2000. He described her as being "very poorly" and "basically moribund on arrival". Sarah was seen by Dr Miller, the Registrar and the Consultant. It was decided that Sarah be taken to theatre for surgery. However, when in theatre she arrested and died before surgery could take place. It was his belief that she arrested prior to being anaesthetised. He pronounced life extinct at 2345 hours on 4 May 2000 at the Southern General Hospital in Glasgow.

Dr Dick gave evidence that on 5 May 2000 he conducted the post-mortem examination of Sarah MacKinnon, overseen by Dr Morton, a consultant pathologist at the Southern General.

The information given to him prior to conducting the examination is recorded in his report (Crown production No 2). Externally he noted that Sarah had a grossly distended abdomen. On making the initial incision Dr Dick was immediately aware that the stomach was grossly distended. It took up the entirety of the inside of the abdomen and was tense with air. There was a tear at the back of the stomach. He gave evidence that the tear was not sufficient to cause the stomach to deflate but was sufficient to allow some of the gastric contents to leak out into the peritoneum, the inside of the abdomen. In his view the tear had not been caused by surgical trauma, but most probably due to distension of the stomach. The tear measured 12 cm in length. Dr Dick had never seen a swelling so distended before. At that time he had carried out about 30 post-mortem examinations. He found no abnormality at the site of the partial fundoplication operation. Although the report records "faecal fluid" it was Dr Dick's evidence that gastric fluid or gastric contents would be a better description. The best cause he could attribute to the tear was the expansion of the stomach itself. By reference to his report he noted that the bronchial tree was inflammed, meaning that there was a red appearance to the naked eye. He suggested that this would be consistent with aspiration pneumonitis. Dr Dick explained that although emphysema appeared in his post-mortem summary, he was now satisfied that there was no evidence that Sarah had emphysema. As far as his findings were concerned he gave evidence that the gastric perforation and the gastric dilation contributed to death, but that the atrophic kidney and emphysema had no relevance to the cause of death. Following the autopsy Dr Dick took small biopsies of relevant tissues for microscopic examination. Because of autolysis or post-mortem degradation or dying of the cells, Dr Dick found histology very difficult. He said that in relation to the stomach he was looking to see if there was any evidence of an ulcer which would have contributed to a tear at that site. He did not see that. There was nothing from histology to explain the tear. He explained that a reaction on the outside of the stomach wall would have given a chance to try and date when the perforation had taken place. He said that he did not see a reaction on the outside of the stomach wall which suggested to him that the perforation was very, very close to the time of death. When asked to explain what he meant by the "traumatic" nature of the perforation site he said that "traumatic" could be replaced by "spontaneous". He said that the stomach had expanded to a point where it could expand no more. He could not rule out this happening during resuscitation but that it was also just as likely to have occurred prior to resuscitation in a time period in the region of a day or a half a day. The histology produced no evidence of aspiration pneumonitis suspected at the time of the autopsy. This therefore could not be confirmed. His conclusion as to the cause of death was that gastric dilation had caused an increase in the intra-abdominal pressure. This had resulted in a splinting of the diaphragm. This had caused respiratory compromise and on top of that there was a perforation. Shown a death certificate (Crown production No 2) Dr Dick said that he did not check for septicaemia but that gastric perforation was found at post-mortem. He said that when the stomach was opened there were a few mls of stomach fluids. There was no food or contents other than some form of gas to cause the massive distension. He found no obstruction in the oesophagus or in the small intestine. He testified that the distension could cause pain or merely discomfort and that it could also cause breathlessness. He agreed that the cause of death was the leaking of gastric contents into the peritoneal sac. This results in severe pain and a shock reaction. He agreed that shock is one of the factors which point in the direction that the tear happened before death. Having been referred to a report from the bacteriology department of the Southern General Hospital (Crown production No 3, page 7) Dr Dick concluded that there was no septicaemia. Dr Dick said that he saw no evidence of inflammation on the outer surface of the stomach or peritoneum. It was Dr Dick's view that the fluid had leaked from the stomach, through the tear into the peritoneal sack at the same time as air or gas trapped in the stomach was not escaping through the tear. He was asked to explain how fluid could

leak from the stomach leaving the stomach grossly inflated. He found difficulty explaining that but insisted that these were the post-mortem findings. He found nothing at post-mortem examination suggesting that the gas could not have passed downwards through the bowel. He found no gastric contents. It was his evidence that he expected the perforation to be within a relatively quick time of death and agreed that that could be a couple of hours.

Dr Morton, Consultant Pathologist, gave evidence that he supervised the post-mortem examination carried out by Dr Dick. He remembered the case because of the acute distension of the stomach which he had never encountered before. He was not present throughout the entire post-mortem. Upon his initial examination of a section of the stomach Dr Morton thought it looked unremarkable. However, a few days prior to giving evidence on 18 December 2002 he identified a mild inflammatory reaction on the serosa of the stomach suggesting that the tear was ante-mortem. According to Dr Morton the 12 cm tear was a partial tear, not a complete tear through the wall of the stomach. He considered the tear being as a result of cardiac resuscitation, but was of the view that the fact that Sarah was in severe shock on admission suggested that the tear was ante-mortem. It was also his view that the leak occurred prior to death. In his opinion the cause of death was severe shock, secondary to chemical peritonitis due to rupture of the stomach due possibly to vomiting. When asked what the most likely explanation as to why the stomach had ruptured he replied that if the wall of the stomach is grossly distended it becomes very thin and with a history of vomiting with increased intra-abdominal pressure within the stomach it does not take very much to rupture. It was his understanding that the word moribund meant virtually on the point of death. Dr Morton agreed with Mr McCaffrey in cross-examination, that if there was evidence of a condition of abdominal pain about 6.30 pm on 4 May 2000, deteriorating to a state of being moribund by admission to hospital later that night, this information confirmed his view as to the causes of death and pointed to the fact that not only was the stomach distended, but that something more was happening which created the moribund state and shock. It was Dr Morton's evidence that the perforation happened prior to death. Cross-examined Dr Morton had no recollection of seeing free fluid present in the abdomen. He was not 100% certain that he had looked at the perforation to the stomach. He agreed that the suggestion of a partial tear would have to be information he got from someone. He agreed that if there had been a full tear he would have expected the gas within the stomach to have escaped. He could not explain how it was possible gas would be unable to escape from the stomach when fluid had been able to escape from it. It was his opinion that if the tear was partial he would have expected some fluid and some gas to escape. He considered it possible on that scenario for the stomach to remain quite distended. He agreed that the mechanism existed by which stomach rupture may be promoted by external cardiac massage and that this would mean that the rupture had occurred at or shortly after death itself. On re-examination it was his evidence that having reviewed the histology there was evidence of a mild inflammatory reaction suggesting that perforation definitely occurred prior to death, in his opinion hours before death. He said that his information about a partial tear would have come from Dr Dick although he agreed that there was no mention of a partial tear in the post-mortem report.

Mr Anderson gave evidence that when he learned of Sarah's death, because of his involvement with her, he agreed to do the discharge summary. In preparing the summary he viewed the accident and emergency card which documented what had happened to Sarah when she attended as an emergency on 4 May 2000. When dictating his letter (page 3 of

production for South Glasgow University Hospitals NHS Trust) the information within the letter had been taken from the accident and emergency card, since lost. Part of Mr Anderson's letter reads:-

"Sarah was admitted as an emergency to our casualty department on 4 May, moribund (Mr Anderson explained that this means close to death's door). She had a systolic blood pressure of 80, a tachycardia of 130, was acidotic and peripherally shut down. She gave a 5 day history of abdominal pain associated with the vomiting. She was immediately transferred to the theatre where resuscitation was commenced but shortly thereafter she developed a cardiac arrest and despite attempts at resuscitation she died at 11.45 pm. Post-mortem examination revealed a gastric perforation along with a lesser curved aspect of her stomach principally into the lesser sac. Both kidneys were atrophic and multi-cystic and she also suffered from emphysema. For her age she had quite marked atheroma affecting the aorta."

Mr Anderson explained that the information contained in the letter came from the medical records with supplementary notes by the receiving surgeons on separate sheets of paper. Mr Anderson said that he had arrived at the post-mortem examination as the abdomen was being opened. He saw that there was a tear on the lesser curved side of the stomach. The operation site appeared to be satisfactory. Returning to Sarah's condition on admission, Mr Anderson said that a blood pressure of 80 was low, tachycardia of 130 is a significantly increased heart rate, acidotic is a reflection of the patient's metabolic status, that is, there is some serious mischief going on and peripherally shut down means that she is shocked and is compensating by cutting or reducing the blood supply to the skin and muscles, trying to preserve the blood supply to the fundamental organs. Mr Anderson agreed that at post-mortem the stomach was massively distended. He agreed with a cause of death of severe shock due to chemical peritonitis due to rupture of the stomach which was grossly distended. He agreed with this on the basis of clinical presentation of Sarah on the day she came into the Southern General together with what he observed at the post-mortem. It was Mr Anderson's evidence that vomiting is a classic cause of perforation of the gastro-oesophageal junction, but as far as he remembered there was no history of significant vomiting. Had the vomiting been a major problem causing the rupture, he would have expected the force required to rupture the stomach to have affected the operation site. Mr Anderson later said that if there is gross distension, in the absence of surgery it is unlikely that the patient would vomit. The angle between the stomach and the gullet will increase to the extent that the gullet would be closed completely by direct pressure and if the contents of the stomach could not get out of the lower end of the stomach then at some point in time that stomach would rupture. He agreed that if the stomach ruptures, gastric contents leak out into the abdominal cavity causing chemical peritonitis.

Dr Gilmour, a Pathologist with a special interest in the gastro-intestinal tract gave evidence in relation to his report (production No 1 for North Glasgow University Hospitals NHS Trust). He had examined certain slides obtained at the post-mortem examination of Sarah MacKinnon. In relation to the slides from the stomach it was his view that the irregular disruption was in keeping with a tear of the stomach wall as opposed to a cut at the time of the autopsy. He continued in relation to his finding of cells indicating early acute inflammation:-

"The presence of some reaction, as indicated by these particular cells, would suggest that this is something that occurred prior to death."

He regarded it as possible that the stomach wall tore either completely or in part prior to death. Asked if the histology slides show any inflammatory response to gastric contents Dr Gilmour said that they did. His findings suggested the possibility that that part of the stomach which he examined had been exposed to gastric juice, particularly acid. He continued that the question of how acid the contents might have been could have been influenced by drugs that Sarah might have been taking. He found no obvious established, acute inflammatory response on the outer surface to suggest reaction had been going for many hours. In relation to Sarah it was his view that the relevant time period was probably up to 6 hours and certainly no more than that. Accordingly if Sarah was certified dead at 11.45 pm he agrees that the relevant time period would be from about 5.45 pm. When asked about the most likely time of the tear from the material available Dr Gilmour concluded that:-

"The fact that there was an inflammatory response in the wall of the stomach in the area that I interpreted as being the area of the tear, suggests that damage occurred a few hours before her death, but it is not possible to be certain whether this represented a partial tear or a complete tear through the gastric wall."

It was Dr Gilmour's view that a partial tear would not permit leakage of the stomach contents into the abdomen. Asked if the appearance of the inflated stomach at post-mortem could be reconciled with the existence of a 12 cm tear Dr Gilmour indicated that he did find it difficult to think of a logical explanation. He had discussed this with colleagues who had done a large number of autopsies and had seen many dilated stomachs and neither could recall any such situation. However, since writing his report Dr Gilmour had been able to identify a case report with some similarities to the present case where the abdomen wall was opened with a surgical incision and the abdominal organs including the stomach, the colon and the small bowel were distended with gas and protruded through the incision. Further exploration revealed a large tear in the gastric wall. It was seen therefore that there was a case report with a similar situation where there appeared to be a complete tear in the gastric wall and the stomach retaining the gas even though the wall of the abdomen had been incised. It was felt in that case that the pressure of the gas inside the stomach pressing the rent, the tear, against the abdominal wall, had prevented escape of gas from the rent or tear. In that case the clinical history suggested that the tear had existed for a few hours. Dr Gilmour explained his understanding of a partial tear but repeated his earlier evidence that in order for the stomach contents to leak out into the abdomen there would have to be a complete tear. Cross-examined Dr Gilmour stated that he had not seen the record from Glasgow Emergency Medical Services (Crown production No 15) from the emergency doctor who saw Sarah prior to admission to the Southern General the night she died. From what is recorded there Dr Gilmour expressed the view that something untoward was going on within Sarah's abdomen and the absence of bowel sounds suggested that the movement of the bowel had ceased which can occur as a result of irritation. It was his view that peritonitis was a reasonable clinical assessment at that time. He was also referred to the content of Dr Miller's affidavit and he agreed that this suggested that things had progressed since the time when the G E M S doctor had seen her. He was finally referred to the letter from Mr Anderson (production No 3 for South Glasgow University Hospitals NHS Trust) where certain

information obtained from the emergency records was recorded. Dr Gilmour agreed that this all painted a picture of the clinical appearance of shock and that this can occur due to chemical peritonitis. He regarded as a reasonable interpretation Dr Morton's suggestion that the cause of death was severe shock due to chemical peritonitis due to a rupture of the stomach which was grossly dilated. Cross-examined by Mr Jessiman, Dr Gilmour stated that it is not possible to have peritonitis without the full perforation of the stomach. He continued that the peritonitis was a clinical impression from the G E M S doctor. There was no definite evidence that there was peritonitis present at that time. Dr Gilmour explained that you can have irritation of the peritoneum as a result of a partial tear. You can also get features which clinically mimic peritonitis with acute gastric dilatation. In addition to the gross gastric dilatation being a possible cause of the perforation Dr Gilmour stated that prolonged retching or vomiting can produce gastric tears without there necessarily being gastric dilatation.

In their submissions to me the Procurator Fiscal Depute, Mr McCaffrey, Mr Holmes, Mrs Kennedy and Mr Jessiman agreed that the cause of death had been established on the basis of the evidence led at the Inquiry, although there were slight differences as to the wording of the cause of death suggested by them. Only Mr Stephenson submitted the cause of death had not been established. He made reference to the lack of evidence due to the missing Southern General Hospital records, detailing Sarah's condition and treatment on the night of her death; the absence of ambulance records relating to her condition and treatment at her home and during the journey to the Southern General Hospital; the absence of evidence from medical and nursing staff who must have been involved in Sarah's treatment at the Southern General and the absence of a record of cause of death from Dr Miller's affidavit. He made reference to the evidence of Drs Dick, Morton, Gilmour, Mr Anderson and Professor Krukowski and submitted that on the evidence led all there could be said was that Sarah Anne MacKinnon was admitted to the Southern General Hospital at about 2120 hours apparently in shock, she was pronounced dead 23/4 hours later following cardiac arrest, suffered shortly before commencement of an unknown surgical procedure and in circumstances that are unknown. It was his submission that the causes of her shock and subsequent cardiac arrest were not established on the evidence and that the tear in her stomach may have been caused by (necessary and appropriate) medical treatment as may the extent of the inflation of her stomach.

In my view the submission of Mr Stephenson was not well-founded. I was satisfied on the evidence to which I have referred that the cause of death was established. Of particular significance was the evidence of Dr Herron who described Sarah's condition prior to being taken to the Southern General and the affidavit evidence that her condition had deteriorated to that of "moribund" by the time she arrived at the hospital. I was satisfied that Dr Herron's diagnosis of peritonitis at the time of his examination several hours before her death was sound. His diagnosis was confirmed by subsequent findings. The evidence of Dr Gilmour in relation to his explanation of how there could be a 12 cm tear in the stomach and yet it remained distended, was of considerable assistance to the Inquiry, as he was the only witness who could offer any sort of satisfactory explanation for these findings. Having regard to the evidence as a whole I concluded that the cause of death had been established.

Communication

Evidence of the communication, or perhaps more importantly, the lack of it, between and among doctors was given by Dr Anderson, Dr Henderson, Dr Briggs, Dr Rodger, and Professor Krukowski.

Mr Anderson gave evidence of liaising with Dr Rodger at the Western Infirmary, and that by letters in January and February 2000 they agreed that Sarah would be dialysed at Gartnavel up until the time for surgery and transferred from the Southern General on the first post-operative morning back to the Western Infirmary where Mr Anderson would participate and assist in her post-operative care. Mr Anderson was aware of the complications which can arise from the operation which he performed. There was no discussion between him and the staff at the Western Infirmary in relation to these complications. According to Mr Anderson he would be looking after Sarah's abdomen and other potential complications relating to her surgery and the Western Infirmary would be looking after her chronic dialysis although there would be some overlap. Mr Anderson envisaged seeing her every 2 or 3 days unless there was a problem. He explained that he carried a pager and could be contacted if required. He said that he saw Sarah after the operation and on the following day prior to her transfer to the Western Infirmary. Although Sarah was complaining of pain, according to Mr Anderson that was to be expected and he was happy with her general progress. He said that he saw Sarah at the Western Infirmary on 31 March when she was still in pain although satisfactory. Her abdomen showed tenderness but no significant distension. At this visit Mr Anderson recorded in the medical notes:-

"Surgical abdomen soft. I'd be happy for Sarah to drink up to the limit you set. Tomorrow she can start a light/sloppy diet. Will review mane.

John Anderson (Cn Surg S G H)."

The purpose of this note was to let the medical staff know that Mr Anderson was happy with Sarah. On this occasion he saw Sarah with a member of the nursing staff. He said that he next saw Sarah on 1 April 2000 when, although she was still complaining of pain, she was satisfactory. Mr Anderson made no note of this visit and on this occasion met neither nursing nor medical staff. He said that he next saw her on 3 April 2000 when he was pleased with her progress. He said that he would not have looked at the medical records to ascertain if there had been any problems, but would have relied on the nursing staff to tell him. He said that he would have had easy access to her TPR charts and that there was nothing on those charts which gave him cause for concern. He examined her stomach and everything appeared to be in order. He said that he next saw Sarah on 5 April 2000 when he made no note in the medical records. The nursing staff told him about Sarah having collapsed in the toilet on 4 April 2000. Mr Anderson was not concerned about this because Sarah was lucid. He did not look at the medical notes. To him talking to the patient, examining the patient and looking at the charts kept by the nursing staff were far more important than looking at the results of any tests. Following physical examination of Sarah on this occasion nothing gave him cause for concern. When Mr Anderson saw Sarah on 5 April 2000 she was fine. When he saw her on 7 April 2000 he did not note any particular distension to Sarah's stomach. On 10 April 2000 Mr Anderson again visited Sarah when he was told that she had had an x-ray taken and a naso-gastric tube passed. He assumed the tube was passed because there was

fluid in the stomach or suspected fluid in the stomach. He considered it to be reassuring that only a minimal amount of fluid aspirated and the tube then removed as, to him, that meant there was no significant problem with the stomach, as far as he could tell. It was Mr Anderson's evidence that he was not sure of the reason why a tube had been inserted but felt that as this had been done, the physicians had a reason for it. Mr Anderson was not consulted about the tube. Mr Anderson was told on Monday 10 April 2000 that Sarah had had a scan by the nurses who were not sure of the results of the scan. Mr Anderson was aware that Sarah had had an ultrasound scan. As a surgeon he said that he would order such a scan to be carried out on a patient after surgery who had clinical evidence of an abscess or a collection. In Sarah's case he did not request a scan. He would have done so had he suspected a collection of fluid or blood or the potential development of an abscess inside the abdomen after surgery and that this happens after any operation or can do. It was Mr Anderson's evidence that there was no clinical evidence in Sarah's case that she was developing any kind of intra-abdominal abscess or collection. When he visited her on 10 April 2000 Sarah was still complaining of pain. She was not complaining of swelling of the stomach. Mr Anderson was not made aware of the results of the scan. After 10 April 2000 he did not see Sarah again. He told the nurses at the Western Infirmary that he was going on a course on the Wednesday, Thursday and Friday of that week. He next contacted the Western on 17 April 2000 to be told that Sarah was being discharged home, well. Mr Anderson was not involved in the decision to discharge her. On the basis of the information given to him he was not unhappy with that decision. When referred to the notes made on 11 April 2000 to the effect that the ultrasound scan of the abdomen revealed "gross gastric dilation with fluid residue," Mr Anderson said that such a result did give him cause for concern. Mr Anderson said that he had asked for the notes but that these could not be found. At the time he was not concerned because Sarah gave him no clinical cause to suspect that she was developing a collection and he was of the view that the doctors at the Western Infirmary were carrying out the ultrasound examination because they suspected a collection. Accordingly, when the notes could not be found Mr Anderson was not overly concerned. To him the word "gross" suggested that a problem was developing and he would have expected someone to tell him about it. No-one did. He saw none of the medical staff on any of his visits to the Western Infirmary. The communication was between him and the nursing staff. Mr Anderson regarded the ultrasound report as significant and while some distension might be expected after surgery he would not expect gross distension after the type of operation Sarah had. When asked about the CT scan which Sarah was going for on 11 April 2000 it was Mr Anderson's view that this was much the same thing as an ultrasound scan and would normally be requested when looking for an abscess or a collection. Mr Anderson did not see the result of the CT scan carried out on 11 April 2000 and reported on 13 April 2000. This was reported to show "---very extensive gastric dilatation---". This finding caused Mr Anderson concern as he did not understand why she had it and, if it was extensive, it needed to be decompressed. This report was never brought to Mr Anderson's attention. He would have expected this to have been brought to his attention by someone from the Western Infirmary. Mr Anderson gave evidence that had he been told about the very extensive gastric dilatation he would have passed a naso-gastric tube and left it in place to let any fluid in the stomach pass back up through the tube and allow the stomach to regain its less distended appearance. Mr Anderson was unaware of Sarah's abdomen being tense. From his examination of the notes it appeared to Mr Anderson that nothing was done to try to resolve Sarah's gastric dilatation. Apart from the naso-gastric tube, Mr Anderson gave evidence that medicines can be used to improve the emptying of the stomach and, as a last resort, surgery can be performed to drain the stomach. Mr Anderson's evidence was that he would have expected someone to pick up on the extensive gastric dilatation being a problem. Although happy with Sarah's discharge on the basis of the information which he

had at that time, having looked at the notes and results of her CT scan, it was Mr Anderson's position that he would not have discharged her on 17 April 2000. As he envisaged it, the major problem after Sarah's surgery was her renal failure and dialysis. He was referred to an entry in the nursing notes which stated on 10 April 2000:-

"Doesn't think there is anything surgically wrong with Sarah at this stage However, he will call back tomorrow to find out how her CT scan went."

Mr Anderson said that he probably did say that he would need to chase up the results of the CT scan. He did not do that. Mr Anderson was asked about an entry at p15 of production no 4 relating to an x-ray report which recorded "There is quite marked distension of the stomach with a large fluid level present within it. Generalised faecal loading is seen throughout the large bowel. No other diagnostic abnormality." This confirmed, according to Mr Anderson that the gastric distension which was present at Sarah's discharge from the Western Infirmary was still present on 21 April 2000. This concerned Mr Anderson because whatever had caused the problem was continuing rather than getting better. Mr Anderson said that he would not have expected a consultant physician to pick up that Sarah had a distended stomach on clinical examination because he, Mr Anderson, had not. Mr Anderson was unaware of any discussion about Sarah between the medical staff at the Western Infirmary and any of his surgical team. Mr Anderson said that if one of his registrars at the Southern General had been told that Sarah had gross or marked gastric distension, he would have expected the registrar to pass that information to him. No such information was passed to him. No member of his staff ever indicated that there had been any discussion with anyone from the Western Infirmary about the abdominal x-ray carried out on 21 April 2000. At Sarah's mortality meeting, no-one at the Southern General spoke of having received any message from the Western Infirmary. He was referred to Crown Production No 8, a report by Dr Briggs which claimed that there was "-frequent consultation with Mr Anderson-". Mr Anderson did not think that at any time on his visits to the Western Infirmary he saw any junior or senior member of the renal dialysis team. It was Mr Anderson's evidence that his only contact was through speaking to the nurses at the Western Infirmary prior to 10 April 2000 and on 17 April 2000 and at no time was there any mention of gross dilatation of the stomach. Asked about his lack of contact with the medical staff, Mr Anderson said that he did not think that this was particularly necessary because on every occasion that he saw Sarah her clinical condition seemed satisfactory. Cross-examined by Mr McCaffrey, Mr Anderson agreed that what happened to Sarah should not have happened and that it was his view that she was not managed properly post-operatively. He agreed with Mr McCaffrey that he assumed that the Western Infirmary medical staff would tell him if there were any problems. He also agreed that the Western Infirmary medical staff may have assumed that as Mr Anderson was going to be visiting the Western Infirmary, he would deal with all the problems. He agreed that he did not chase up the results of the CT scan because this was an investigation which had been asked for by the physicians and he was not concerned that Sarah was developing an abscess or collection. In retrospect he accepted that it was wrong for him to have assumed that he would be told the results if there was a problem. When he telephoned on the Monday (17 April 2000) and heard that Sarah was going home, he wrongly assumed that the CT scan had shown no abnormality. In hindsight he agreed that he should have been consulted before Sarah was discharged. He agreed that if he had had all the information which is now available he would not have allowed Sarah to be discharged. He agreed that prior to a patient being discharged the specialists in charge of her other

concerns should be fully consulted before discharge. He agreed with Mrs Kennedy that if Dr Henderson from the Western Infirmary had called one of Mr Anderson's registrars following the x-ray taken on 21 April 2000 and if he had said something along the lines that Sarah had been constipated and had gastric distension, it would not have been unreasonable to recommend laxatives. To Mr Jessiman he said that he assumed that Sarah was kept in hospital between 10 and 17 April 2000 because of her renal problems as on 10 April there did not appear to be any surgical issues. He agreed with Mr Stephenson that the most probable cause of the gas distension was damage to the vagal nerves during surgery. Such damage would affect the ability of Sarah's stomach to empty into the small bowel. He would expect to find that food and liquid consumed by Sarah would tend to stay longer than it should in the stomach. Mr Anderson agreed that it would be not unreasonable for the physicians at the Western Infirmary to assume that Mr Anderson made himself aware of the results of the CT scan.

Dr Andrew David Henderson gave evidence of being a senior house officer at the Western Infirmary renal unit in April and May 2000. He saw Sarah after her discharge on 17 April 2000 when she was returning for haemodialysis. Asked about partial fundoplication surgery he replied that being a physician it was not something within his realm. He was asked to see Sarah on 21 April 2000 because she was complaining of abdominal pain. He examined her abdomen and found it to be distended and it sounded as if it was full of air. He organised an abdominal film to assess if there was further evidence of constipation which had been a problem while Sarah had been in hospital. He had no recollection of ever having looked at Sarah's medical records to see any history of her problems. When he obtained the x-ray he noted that the stomach was dilated, had gas in it and that there was constipation. Dr Henderson was sufficiently concerned about this to telephone the Southern General. He spoke to one of the surgical juniors working with Mr Anderson. Dr Henderson thought that the distension of the stomach might be related to the operation. He could not remember the name of the person to whom he spoke but thought it was a registrar. He said that the registrar told him he was aware of Sarah's case and Dr Henderson explained that she was having continuing abdominal bloating and described the x-ray to him. As far as Dr Henderson could remember, he was told that a degree of gastric distension was common post fundoplication surgery and not concerning and that he should treat the constipation, which he did. Dr Henderson did not recall whether he said there was marked distension or just distension. Having spoken to the registrar Dr Henderson said that he was reassured. Dr Henderson was not aware of any other contact between the Western Infirmary and Southern General. Dr Henderson was aware of ongoing problems due to abdominal pain and bloating. He was aware that this had been an ongoing problem since discharge. Dr Henderson said that after he had commenced laxatives Sarah's abdominal pain and bloating improved and her abdomen became less distended. He accepted that it may have been 26 April 2000 when he saw Sarah. He last saw Sarah on 3 May 2000. It was Dr Henderson's evidence that, although he was aware of the standard post operative complications, he was unaware of any particular complications that can arise from partial fundoplication surgery. It was his evidence that any gastric operation will lead to distension.

Dr Briggs, in his evidence described the rotation system within the renal unit of the Western Infirmary whereby there was always one consultant available and responsible. It was Dr Briggs' evidence that very detailed hand overs took place between the consultants. When asked of his awareness of an operation called partial fundoplication at about the time of

Sarah's surgery, he replied that he would probably have had no idea of what it was. He said that in terms of patient supervision from the point of view of the operation, it would have to be a surgeon, because people like Dr Briggs did not have the necessary knowledge. He was unaware of the main complications which can follow from partial fundoplication. It was his position that the surgeon would be supervising Sarah post-operatively regarding any complications. He considered it unlikely that any of the nursing staff at the Western Infirmary would have any experience of the care of a patient who had undergone a partial fundoplication. Dr Briggs had no personal discussion with Mr Anderson about Sarah MacKinnon at any time. Dr Briggs said that he was 99% certain that Mr Anderson would talk to the doctors on the ward when he came to the Western on 31 March 2000. Dr Briggs found it surprising that Mr Anderson did not speak to any medical staff at his visit on 31 March 2000. When referred to the x-ray of the abdomen which showed a hugely dilated stomach, Dr Briggs said that this finding would have caused him to assume that there was a post-operative surgical complication. He said that he would have expected some consultation with Mr Anderson about this. Again he said he would be surprised if Mr Anderson was never made aware of this finding. He said that he would assumed that Mr Anderson would know why the CT scan was carried out. Dr Briggs was referred to a report prepared by him (Crown production No 8) where it is said:-

"While severe pain is to be expected following abdominal surgery, the continuation of such pain beyond the first few days is unusual and was therefore a source of concern. In view of this there was frequent consultation with Mr Anderson and also with the surgical team within the Renal Unit."

It was Dr Briggs' evidence that he recalled that there were conversations between the medical staff in the Renal Unit and Mr Anderson. He said that there was bound to have been consultation and there was, but he did not know the dates or times. Dr Briggs said that he was told subsequently by another member of the medical staff that a Dr John Irvine had telephoned Mr Anderson. He agreed that Mr Anderson should have been made aware of the terms of the x-ray report either by reading it or having it transmitted to him. Prior to 10 April 2000, Dr Briggs said that it was his personal opinion that the dilatation in Sarah's case was more than would be expected and that accordingly he would want to be satisfied that she had been seen by a surgical expert. Dr Briggs pointed out that according to the records Mr Anderson saw Sarah on 10 April 2000 and that there was a record in the notes at 1900 hours which was:-

"Mr Anderson doesn't think there anything surgically wrong with Sarah at this stage. However, he will call back tomorrow to find out how her CT scan went."

Dr Briggs said that this note suggested that Mr Anderson was aware of the dilatation but felt that observation was the appropriate course of action in the meantime. Dr Briggs said that his assumption was that Mr Anderson must have known that there was gastric dilatation or he would have asked the nurses why a CT scan was being done. If the nurses had not known why a scan was being done, according to Dr Briggs, the conversation would have been reported and there would have been further communication or discussion. Dr Briggs said that he would have been concerned if there had been no communication or discussion

with Mr Anderson, as Mr Anderson was in charge of Sarah's post-operative care. According to Mr Briggs, if Mr Anderson had not been informed by the medical or nursing staff, he should have asked why a CT scan was being carried out. He continued that to make sure that Mr Anderson was fully aware of the dilatation he would expect verbal communication in case the medical notes were not available or the nursing staff did not know to advise Mr Anderson. Dr Briggs said that he was fairly certain that verbal communication did take place but could not say when or how often. He agreed that there was no record of Mr Anderson having reviewed the CT scan despite the note dated 10 April 2000 to the effect that he would. Dr Briggs said that he would have expected a conversation between medical and nursing staff on the day or so after 11 April 2000 as to whether Mr Anderson had been back. If Mr Anderson had not been back Dr Briggs' assumption would be that one of the medical staff in the Western would have telephoned the Southern General. Having been referred to the records of the Western Infirmary, Dr Briggs agreed that Sarah's stomach distension and pain had continued from 7 April until 15 April 2000. It was Dr Briggs' evidence that Sarah's condition was not something that would immediately respond to treatment. He was fairly certain that his thinking at the time was that there was a post-operative complication, Mr Anderson was aware of it and felt that observation was the appropriate course of action. He did not consider contacting Mr Anderson himself as it was standard practice to ask a junior doctor to do that. On 17 April 2000, Dr Briggs discharged Sarah. He made reference to a note on 15 April 2000 relating to a provisional decision to discharge. Dr Briggs was satisfied that Sarah was well enough to go home, knowing that she would be returning to be treated and observed three times a week thereafter. He did not consider discussing Sarah's discharge with Mr Anderson. He said he was "virtually certain" that he would never have discharged a surgical patient without having been assured that the surgeon responsible was satisfied that the patient could go home. He was sure that someone would have discussed it with Mr Anderson. He had assumed that Mr Anderson knew about the CT scan and the gastric dilatation. Asked about the adequacy of communication between the renal staff in the Western and Mr Anderson, Dr Briggs said that with hindsight it would seem that communication was unsatisfactory. He said that Mr Anderson must have been aware of the gastric dilatation because he knew that Sarah was having a CT scan and one does not do a CT scan unless there is good reason for it. He agreed that if Mr Anderson had not been aware of the CT scan result and had telephoned to be told that Sarah was being discharged it was fair for Mr Anderson to assume that the CT scan had shown nothing. He said that if he had been told that Mr Anderson had not come back to find out the result of the CT scan, he would have asked the doctor on the ward to telephone Mr Anderson to make sure that he was satisfied before Sarah went home. He assumed in making a decision to discharge Sarah that Mr Anderson was fully aware of the results of the CT scan and x-ray. When asked if he was aware of any treatment that could be given for Sarah's problem, he replied that he was not and that as far as he knew there was no treatment that could be given for the problem, the hope being that it will resolve spontaneously. He accepted that there was a problem with communication. He said it never crossed his mind at the time of discharge that Mr Anderson knew nothing of the post-operative complication. He continued that if he had known that Mr Anderson knew nothing of it he would certainly not have agreed to Sarah's discharge and would have telephoned Mr Anderson personally. His evidence was that during the week prior to Sarah's discharge he was in no doubt that Mr Anderson knew what was happening. He said that he would never have discharged a patient with post-operative surgical problems without being sure that the surgeon was agreeable to discharge. He said that one factor he took into account in discharging Sarah was the fact that she was going to be very closely observed. He did not know whom he told to observe Sarah closely, but presumed it was Dr Irvine. He said that he was bound to have passed on the information to the doctors who would be looking after her. He said that he did not have responsibility for

Sarah's care after her discharge but that that responsibility was transferred to Dr Rodger. He did not know why a discharge letter was not written. He did not agree that this was a serious omission because Sarah's follow-up was being supervised very closely in the Western Infirmary. He said that he would not have assumed that his colleagues had been in touch with Mr Anderson, but had no memory of this due to the passage of time. Cross-examined by Mr McCaffrey he said that he was quite sure that he would not have discharged Sarah if he had thought that Mr Anderson was unaware of what was going on. Dr Briggs said that if the surgeon is reviewing a patient in the post-operative period he would expect that the surgeon would not be just looking at the patient but looking at the records and the results of investigations. Cross-examined by Mr Jessiman he said that he would have asked his SHO to contact the Southern General to enquire about Sarah's discharge. He said that he would have asked if there had been communication and if there had not, he would ask that there be communication because he would not have felt it appropriate to agree with Sarah's discharge if he thought that the surgeon was unaware of the complication of her gastric dilatation. Dr Briggs took into account in considering the discharge the pulse and temperature chart which indicated that essentially her pulse and temperature were normal on the day of her discharge and for the few days prior to that. There was also an improvement in her food intake. He emphasised his belief that the communication/liaison in the Renal Unit was of the highest standard and that even doctors who had not attended Sarah would know of her progress and the important facts about her medical condition. Dr Briggs said that he was fairly sure that there was communication from the Western Infirmary to the Southern General Hospital prior to Sarah's discharge and that the information he got back was that there was no contraindication from the surgical point of view to discharge. He also took into account that there had been bowel movement. Cross-examined by Mr Stephenson he said that he would have expected Mr Anderson to look at the medical records when he visited as a general rule.

Dr Rodger, a Consultant Physician at the Western Infirmary gave evidence of having agreed with Mr Anderson that Sarah would be transferred to the Western after surgery at the Southern General. It was Dr Rodger's evidence that it was not unusual for a patient to receive surgery although normally not elective, in another hospital and then be transferred to the Western for renal support. However, it was unusual that the other hospital should be the Southern General as his main experience was that the other hospital would be Gartnavel. Communication between surgeons at Gartnavel and Western Infirmary physicians was the same as had been arranged with Mr Anderson, namely that they would visit. Dr Rodger envisaged that there would be good communication with verbal communication as necessary. In relation to partial fundoplication, Dr Rodger was not aware of the complications which can arise from this type of surgery. He said that if a surgical complication arose surgical advice would be sought from Mr Anderson, that is, the surgeon who carried out the operation. As Dr Rodger was going to be on holiday at the time of Sarah's transfer he said that he discussed the case with his consultant colleagues and in particular Dr Briggs. He told Mr Anderson that he was going to be on holiday and that Sarah's care would be supervised by his colleagues, in particular Dr Briggs. Dr Rodger was not involved in Sarah's inpatient care at the Western after her transfer from the Southern General. When it was put to him that Mr Anderson was not told about the extensive gastric dilatation, Dr Rodger's evidence was that this suggested a failure in communication. He would not have discharged Sarah without surgical consultation. From his examination of the records, the problem which was keeping Sarah in hospital was a surgical one and he would accordingly have been concerned had there been no consultation with Mr Anderson prior to discharge. Although Dr Rodger had a discussion with Dr Briggs, at no time was he made

aware that Sarah had a grossly distended stomach. Had he been made aware of that he would have discussed it with Mr Anderson. It was his evidence that had he seen the x-ray report on 26 April 2000, he would have been worried about it. At no time was Dr Rodger told that Sarah's stomach was swollen. As the consultant in charge of Sarah's care, Dr Rodger was not aware that Dr Henderson had been asked to see Sarah nor of the consequent x-ray result. He was not aware that Dr Henderson had discussed Sarah's gastric distension with the surgical team at the Southern General Hospital. He would have expected to know about these matters. When it was put to him that Mr Anderson had given evidence that he was not made aware of the gross distension of the stomach and that had he been made aware, he would have suggested treatment, and that Dr Briggs' position was that he did not think that there was any treatment but that he hoped that the problems with Sarah's stomach would resolve themselves, Dr Rodger agreed that it sounded as if there was no communication between them. In his view it was essential that there be good communication between specialists where there has been a major operation in one hospital and the patient transferred for post-operative care to another hospital. Dr Rodger said that he did not know a lot about fundoplication surgery. Cross-examined by Mr McCaffrey it was Dr Rodger's evidence that in his discussions during the period from 17 April 2000 to beginning of May 2000 at no time did Dr Briggs, Dr Henderson, Dr Junor, Dr Irvine or any other doctor say to him that Sarah had had an abdominal distension problem and that it was a continuing problem. He was not told that she had ongoing problems with pain. He agreed in relation to discharge letters that it would be a breakdown in communication if no discharge letter was sent. He explained that the desire was to get all discharge summaries out within a week. By reference to the records Dr Rodgers agreed that in the period 9 to 15 April 2000 Sarah's abdominal girth had reduced, her pulse rate was within normal limits, her temperature was within normal limits; by 16 April 2000, her blood pressure was within normal limits for her; by 17 April 2000 no vomiting was noted; she was ambulatory; on the day of her discharge and on the previous two days there was no indication there was any problem with her bowels; her food intake seemed to be relatively good and Sarah felt able to go home. He agreed that her clinical condition appeared to be improving by the time of her discharge on 17 April 2000. He said that if his understanding had been that contact had been made with the surgical team of the Southern General in the week prior to discharge he would have been reassured by that. It was Dr Rodger's evidence that usually when he went to visit a patient in another ward he would look at the medical notes to find out what was happening as well as talking to the nursing and medical staff. It was Dr Rodger's position that as the consultant in charge of Sarah, around about the time she left hospital he was told by Dr Briggs that there was no ongoing problem which he had to deal with.

Expert Evidence

Expert evidence was led from Zigmund Henderson Krukowski a consultant surgeon in Aberdeen Royal Infirmary and Professor of Clinical Surgery at Aberdeen University. Following instructions by the procurator fiscal's office in Glasgow Professor Krukowski prepared a report (Crown Production No 5). Professor Krukowski said that he had carried out 440 fundoplication operations in the previous ten years. He said that after fundoplication surgery it is very common for the patient to experience increased abdominal bloating. It was his evidence that the thought which went into the need for surgery, the operation chosen and the management of Sarah Anne MacKinnon's kidney failure were all organised to a high standard and carried out competently. He said that the early complications which people

experience are relatively rare, but one of them is gastric distension which can be quite severe. He said that there was treatment available for abdominal distension and if someone was in pain and grossly distended, a tube should be passed down into the stomach to decompress it. He said that the passage of such a tube was necessary in one per cent of cases. It was Professor Krukowski's view that had the severity of the distension and the images been available to Mr Anderson the Professor would have expected him to have a role in the management of the distension. It would be of concern to him if Mr Anderson was not made aware of the results of the scan and x-rays. It was his view that if there was a report which showed gross distension of the stomach on more than one investigation that should have been transmitted actively to the surgeon. The Professor identified as one of the problems of communication in a big hospital the continuity of middle grade staff when passing on information to the consultants. He said that nowadays it is very difficult to get junior house staff, because of the changed patterns of junior doctors' work, who can tell a visiting doctor in the evening what has been going on during the day. Because of changes in medical staffing in hospitals he said that it now such that when you visit a ward it is unlikely that you will get a doctor, either present on the ward, or if they are on the ward they are not likely to be from that ward. Therefore the level of communication from a doctor to a visiting doctor is sub-optimal. It was his view that if there was a major abnormality on three different investigations, the surgeon ought to have been actively informed about it. Asked about the results of the CT scan, the Professor said that it would have been ideal had Mr Anderson pursued the result but that very often surgeons rely on people telling them things rather than chasing everything up themselves. From his examination of the medical and nursing notes it appeared that, other than the naso-gastric tube no active treatment was provided for Sarah at the Western Infirmary prior to her discharge. According to Professor Krukowski a tube should have been placed in her stomach and kept there for a few days to allow decompression and recovery of tone. It was his evidence that had Sarah been treated actively the problem would have been reduced. Treatment had always been successful in the Professor's experience. When referred to Mr Anderson's evidence that had the distension of Sarah's stomach been brought to his attention, he would have passed a naso-gastric tube and left it in place, Professor Krukowski stated that this would have been the correct thing to have done. It was clearly not the case that nothing could have been done for her, as seemed to be the view of Dr Briggs. It was his opinion that the assessment over the telephone of the x-ray taken on 23 April 2000 was, in hindsight, inaccurate. It was the Professor's opinion that Sarah should have received active management prior to discharge on 17 April 2000. He agreed that if there had been no gastric dilatation Sarah would probably not have died. He agreed that if Sarah had been properly managed post-operatively and her distended stomach properly discussed between Mr Anderson and the staff who were looking after Sarah in the Western Infirmary, her death could have been avoided. He was clear that optimum communication between physician and surgeon would have affected the outcome. In his opinion Sarah was not managed post-operatively in the best manner. He said that it is likely that if the distension had been reduced her stomach would not have ruptured causing her death. In relation to the telephone call made by Dr Henderson, it was the Professor's view that, if there was a telephone call to the registrar, he would probably expect him to at least mention that to Mr Anderson. Cross-examined by Mr McCaffrey, the Professor agreed that he would have expected a competent surgeon to have detected the distension and reacted to it. The Professor did not criticise Mr Anderson for not having detected the distension as it is possible for a patient to accommodate a very large stomach within the abdomen without it being terribly obvious. He gave the example of a patient on his own ward who was known to have four litres of fluid in his stomach without the abdomen being distended. He continued:- "What I would say is if the physician recognised a surgical problem he should have indicated that to the surgeon and discussed it before

discharge. But if you don't recognise a problem you are not in a position to act on it." He would not criticise Mr Anderson for not having found out the results of the ultrasound and CT investigations because he had not initiated them and the Professor pointed out that sometimes physicians do investigations which surgeons would not do. Cross-examined by Mr Jessiman about Mr Anderson's note (Crown Production No 4 page 48) to the effect "Seen by Mr Anderson. Doesn't think there is anything surgically wrong with Sarah at this stage. However, he will call back tomorrow to find out how her CT scan went", the Professor agreed that it would have been reasonable for the physicians to assume that Mr Anderson was not concerned about Sarah's surgical condition and that they should not be concerned about her surgical condition at that time.

Further Evidence

Margaret McLucas gave evidence about the system for keeping medical records. She described the loss of part of the medical records of Sarah Anne MacKinnon. Her enquiries had revealed that the missing records had been passed for destruction. She was unable to provide a satisfactory explanation for this.

Dr O'Neill gave evidence, as Sarah's general practitioner, of her medical history and his involvement in her treatment.

Dr Dominiczak gave evidence of seeing Sarah at the Western Infirmary on the day she died in relation to an endocrine problem. This was the only problem discussed at their meeting.

Barbara Anne Killoran gave evidence of being a staff nurse at the Renal Unit in the Western Infirmary Glasgow. She gave evidence about Mr Anderson attending Sarah on 10 April 2000 and thereafter stating that he would call back to find out the result of the CT scan.

I have not rehearsed the whole evidence led at the Inquiry as this evidence has been transcribed.

Submissions

For the Crown it was submitted that I should determine under Section 6(1)(c) that it would have been a reasonable precaution to provide proper management and treatment for Sarah's gastric distension and that if this had been done her death might have been avoided. The Crown further submitted in terms of Section 6(1)(d) that there were defects in the joint system of working between medical staff at the Southern General Hospital and the Western Infirmary, in particular a lack of adequate communication between Mr Anderson, the surgeon, and the physicians at the Western Infirmary. The Crown further submitted that it was a defect in that no discharge letter was sent to Sarah's general practitioner and that the

supervision by Mr Anderson being sub-optimal was a defect in the system which contributed to her death.

On behalf of the family Mr McCaffrey's submission was that under Section 6(1)(c) the death of Sarah Anne MacKinnon might have been avoided had the doctors involved in her care taken reasonable precaution of engaging in communicating with each other particularly with reference to her abdominal problems. He further submitted that Mr Anderson should not have relied upon the nursing staff at the Western Infirmary but should have examined the medical notes and taken note of all tests carried out. This he said was a reasonable precaution. He further submitted that a reasonable precaution would have been for Mr Anderson to have ensured that a substitute consultant or senior surgeon continued the post-operative care when he was not available. Mr McCaffrey also made a submission in relation to the absence of a discharge letter by Dr Briggs as, according to his submission, this would have provided Mr Anderson with a clear summary of Sarah's care at the Western Infirmary and would possibly have alerted Mr Anderson to the abdominal problems. He added that Sarah's general practitioner may also have been alerted. Finally, Mr McCaffrey submitted that the standard of supervision of the pathologist and quality of his report were matters which ought to be drawn to the attention of the Lord Advocate.

On behalf of Mr Anderson, Mr Holmes submitted that I should make no finding under Section 6(1)(c) to the effect that Mr Anderson failed to take a reasonable precaution whereby Sarah MacKinnon's death might have been avoided. Mr Holmes pointed out that the Inquiry had heard from only two witnesses who cared for Sarah MacKinnon when she was an in-patient in the Western Infirmary between 30 March 2000 and 17 April 2000, namely Dr Briggs whose involvement with Sarah was limited and nurse Killoran who spoke to one occasion when she accompanied Mr Anderson when he visited Sarah on 10 April 2000. Mr Holmes continued that the Inquiry had heard that two other consultants, Drs Junor and McMillan participated in Sarah's care together with more junior medical staff and nursing staff. There was also a suggestion from Sarah's diary and nursing notes that she may also have been seen by surgical staff from the Western Infirmary. Further, no evidence had been led from the registrars working with Mr Anderson at the Southern General Hospital or from staff who received Sarah MacKinnon as an emergency admission on 4 May 2000 (with exception of the affidavits from Dr Miller). While Mr Holmes made it clear that he did not make these comments as criticism of the Crown he urged me to be conscious of the limitations of the evidence presented to the Inquiry particularly in relation to the care provided to Sarah at the Western Infirmary as an inpatient and subsequent to her discharge. He invited me to conclude that it was reasonable for Mr Anderson to expect that he would be informed if investigations undertaken revealed the suspicion of a surgical complication. He asked me to consider that a reasonable precaution whereby Sarah MacKinnon's death might have been avoided was for Mr Anderson to have been informed of the gastric dilatation revealed by the investigations undertaken in the Western Infirmary.

On behalf of South Glasgow University Hospital's NHS Trust, Mrs Kennedy's submissions were that any determination relating to Mr John Anderson and the South Glasgow University Hospital's NHS Trust should be made under Section 6(1)(e). She submitted that upon the evidence it could not be said that there was a reasonable precaution so far as her client and Mr Anderson were concerned which may have prevented the death.

On behalf of Drs Briggs, O'Neill, Rodger and Professor Dominiczak, Mr Jessiman submitted that the note-taking in relation to any conversation or conversations with the Southern General Hospital by the Western Infirmary could have been better but according to his submission that is not something which should be considered in terms of Section 6(1)(c) but rather under Section 6(1)(e). Mr Jessiman accepted that it was clear that there had been errors in communication, but submitted that in the absence of a lot of what he described as "necessary evidence", it could not be said that there were reasonable precautions which should have been taken here, by which the death might have been avoided. He submitted that it might be appropriate to make comments on the individual doctors' roles in the context of Section 6(1)(e). He accepted that there was no doubt that there were failings in communication and difficulties because of the nature of the care being provided by two sites. He continued that the combination of events in this case, such as inadequate telephone communication and the Western Infirmary physicians wanting to consult the surgeon who carried out the operation, rather than their own surgeons, may all have played a part. He accepted that these were undoubtedly all matters which contributed to the death and accepted that I might wish to make findings in the context of Section 6(1)(d) and to comment on the individual doctors' roles in the context of Section 6(1)(e). He submitted that the actings of Dr O'Neill were entirely appropriate, that no findings should be made in relation to Professor Dominiczak and further that there were no reasonable precautions which Dr Rodger could have taken by which the death might have been avoided.

On behalf of the North Glasgow University Hospitals NHS Trust Mr Stephenson's principal submission was that as the cause of death could not be established on the evidence heard by the Inquiry, no question arose at to what reasonable precautions might have avoided the death. His submission was that on the basis of the evidence there were no additional reasonable precautions that the Western Infirmary physicians should have taken to bring the radiological imaging to the attention of Mr Anderson. In relation to "the defects, if any, in any system of working which contributed to the death or any accident resulting in death", Mr Stephenson submitted that the Inquiry heard no expert evidence questioning the evidence of the consultants physicians that the system of rotating consultants physicians between wards and outpatient clinics offered the best patient care and that accordingly no adverse comment should be made about this system of working. In relation to the loss of dialysis records it was Mr Stephenson's submission that there was no reason to believe that the notes which are now missing were not available during the course of Sarah's care and accordingly this is not a matter which is relevant to Sarah's death. Mr Stephenson also pointed out that the Inquiry heard evidence from only two of the doctors who treated Sarah at the Western Infirmary, namely Dr Briggs and Dr Henderson. It was clear from the evidence that others were involved including the two consultants, Drs Junor and McMillan. He pointed out that the radiologist Dr Baxter did not give evidence and none of the imaging was produced and that at least one of the junior doctors who made a number of entries in the case notes and who featured in Sarah's diary, Dr Irvine, was an overseas doctor and had returned home.

It was clear from the evidence of Professor Krukowski and Mr Anderson that severe gastric distention is a recognised, although rare, complication resulting from fundoplication surgery. Treatment was and is available to deal with such distention, either by the insertion of a naso-gastric tube for a long period, to decompress the stomach, by medication or by further surgery. Such treatment, although required rarely, has always been satisfactory in Professor

Krukowski's very considerable experience in this area. I had no difficulty in accepting Mr Anderson's evidence that he was aware of the possibility of this type of complication and of the appropriate treatment for it. I was satisfied that had Mr Anderson been aware that Sarah Anne MacKinnon had gastric distention as revealed in the investigations instigated by the physicians at the Western Infirmary, he would have ensured that the appropriate treatment was given to her.

Drs Briggs, Rodger and Henderson, physicians at the Western Infirmary, were unaware of the complications which could arise as a result of partial fundoplication surgery. No criticism falls to be made of them for that as this was not their area of expertise, but nevertheless that was the factual situation.

From Mr Anderson's point of view he visited Sarah Anne MacKinnon on 31 March, 1 April, 3 April, 5 April, 7 April and 10 April, when although she complained of pain he found no clinical cause for concern. He did not note any particular distention. According to Professor Krukowski this is understandable, as distention is not always obvious on visual examination. Although Mr Anderson was aware that the physicians at the Western Infirmary had instructed a scan and x-rays, he assumed that they suspected an abscess or collection. He saw no basis for this suspicion. I formed the view that Mr Anderson thought that these investigations were needless on the basis of the information available to him. When he telephoned on 17 April to learn that Sarah was being discharged, he assumed that the CT scan was clear.

From the point of view of Dr Briggs he assumed that Mr Anderson would talk to doctors on the ward when he visited the Western Infirmary. He assumed Mr Anderson had been aware of the x-rays result. He assumed Mr Anderson would know why the CT scan was carried out. He assumed Mr Anderson was aware of the dilatation. He was of the view that observation was the appropriate course of action. He assumed Mr Anderson would have looked at the medical records when he visited. He assumed that if Mr Anderson had not returned to review the CT scan one of the medical staff in the Western Infirmary would have telephoned Mr Anderson. It is clear that these numerous assumptions made by both Mr Anderson and Dr Briggs were without foundation in fact. In summary, Mr Anderson thought that the physicians were looking for a collection or abscess and that this would prove fruitless. He saw no evidence of gastric distention. The physicians on the other hand were aware of gross gastric distention but thought that Mr Anderson was aware of this and came to the view that no action other than observation was necessary. The Inquiry heard evidence from one doctor, Dr Henderson, about a telephone call to a registrar at the Southern General on 21 or 26 April regarding the results of a further x-ray showing "marked distention". I did not regard the evidence of this telephone call to be particularly satisfactory. No evidence was led of any record of the call. The name of the person to whom the call was made was not known. There was doubt as to whether the call was made on the 21st or the 26th and the exact terms of the information given to the registrar were not clear. No doubt this was in part due to the passage of time but nevertheless the evidence remains unsatisfactory. In assessing the level of communication which existed, I am conscious, as I was invited to be in submissions, that a number of consultants, doctors and nurses in both the Western Infirmary and Southern General Hospital, who were involved in the treatment of Sarah Anne MacKinnon did not give evidence. However, on the evidence before me, I regarded Mr Anderson as a credible and

reliable witness and accepted from him that he personally was not aware and had not been informed of Sarah's gross distention at any time prior to her death. I also accepted from him that if one of his registrars had been told that Sarah had marked or gross distention, he would have expected that information to be passed to him. Be that as it may, the possibility exists that the registrar, for whatever reason, did not pass the information to him. It is also possible, standing the unsatisfactory nature of the evidence of the telephone call to the registrar, that the extent of the distention was not disclosed. In either situation it appears to me that communication was not adequate. In his evidence Dr Briggs described "very detailed hand overs" which took place between the consultants in the Renal Unit. His Report (Crown production No 8) described there having been "--frequent consultation with Mr Anderson --" in view of the concern about the pain experienced by Sarah. In his evidence Dr Briggs said that he was "virtually certain" that he would not have discharged a surgical patient without having been assured that the surgeon responsible was satisfied that the patient could go home. In light of my assessment of Mr Anderson as a credible and reliable witness and my acceptance of his evidence that he was not made aware of Sarah's condition or consulted about it, I am of the view that Dr Briggs' statement in his Report that there was frequent consultation with Mr Anderson does not reflect the truth of the matter. In relation to Dr Briggs' evidence of there being "very detailed hand overs" between consultants in the Renal Unit I considered this claim in light of the evidence of Dr Rodger which was that at about the time Sarah left hospital, not only was he not given detail of her condition, but he was told by Dr Briggs that there was no ongoing problem. This, to my mind, was not indicative of a detailed hand over, and reflected further on the reliability of the evidence given by Dr Briggs. I repeat that I am aware that no evidence was led from a number of consultants, doctors and nurses involved in Sarah's treatment, but from the evidence which I heard and regarded as credible and reliable it is clear that there was no adequate communication between and among those responsible for Sarah's care both at the Western Infirmary and Southern General Hospital. In light of Black v Scott Lithgow Limited 1990 SLT 612, it is inappropriate for me to be more specific. I am however satisfied that the absence of a system of working which ensured that there was adequate communication between the surgeon and physicians contributed to Sarah's death. I am further satisfied that the creation of such a system was a reasonable precaution whereby her death might have been avoided.

In relation to the submissions made by the Crown and Mr McCaffrey regarding the absence of a discharge letter, I do not consider it appropriate to uphold the submissions, as what would have been the content of such a letter was not sufficiently clear.

In relation to Mr McCaffrey's submission that a visiting surgeon should insist upon seeing the medical notes and noting the tests carried out, to my mind, there was insufficient evidence led at the Inquiry to enable me to uphold the submission.

As regards Mr McCaffrey's further submission that Mr Anderson ought to have provided a substitute surgeon in his absence, in my view this submission is not well-founded. I am unable to conclude that this proposed course of action would either have been a reasonable precaution whereby the death might have been avoided, or that it was a defect which contributed to the death.

Finally, as far as Mr McCaffrey's submission criticising the pathologist and quality of report is concerned, in light of the limited amount of evidence led about this at the Inquiry, I do not consider it appropriate to make any finding along the lines suggested.

SHCathcart.LD.Mackinnon