

FATAL ACCIDENT INQUIRY INTO THE DEATHS OF SHOMI MOSHINA AND STEVEN ALEXANDER WISEMAN

SHERIFFDOM of GRAMPIAN, HIGHLAND and ISLANDS at ABERDEEN

DETERMINATION

By

SHERIFF J K TIERNEY

In

FATAL ACCIDENT INQUIRY

Concerning the deaths of

(1) SHOMI MOSHINA

and

(2) STEVEN ALEXANDER WISEMAN

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1. INTRODUCTION

Shomi Moshina

1) On 26th October 2004, Shomi Moshina, then aged 17, was admitted to Aberdeen Royal Infirmary in a seriously ill condition. Despite the best efforts of the medical staff there she died at 20.00 that day. The cause of her death was meningococcal septicaemia. On the day prior to her admission to hospital, Shomi had returned home early from school complaining of feeling unwell. At about 18.50 on 25th October her brothers, being concerned about her health, and in particular her temperature and her shaking, telephoned NHS 24 for assistance. In the course of that call, which lasted about 17 minutes, Shomi spoke to a nurse advisor. She was advised to take neurofen and paracetamol and to call back if her condition worsened. As the night progressed, Shomi's condition did worsen. She was cold and shivery, had a headache and was vomiting frequently. At about 04.27 on 26th October Shomi's father phoned NHS 24 and spoke to another nurse advisor. This conversation lasted approximately 24 minutes. In the course of it the nurse advisor spoke to Shomi's father, thereafter to Shomi herself, and again to Shomi's father. Both Shomi and her father were insistent that Shomi should be visited at home by a doctor. The nurse advisor for a sustained period of time sought to dissuade them from this but ultimately contacted G-DOCS, the organisation through whom doctors could then be made available to patients who had contacted NHS 24. Dr Watson of G-DOCS telephoned and spoke to Shomi's father and thereupon arranged for a doctor to visit. Dr. Matheson of G-DOCS visited Shomi at home, arriving at 05.23 on 26th October. He examined Shomi and considered that she needed immediate admission to hospital. The Scottish Ambulance Service were contacted at 06.04 and arranged for the immediate despatch of an ambulance Shomi was taken to the Accident and Emergency Department of Aberdeen Royal Infirmary, Foresterhill, arriving at 06.45. She was immediately seen by doctors in that department who involved a doctor from the Infectious Diseases Department. Her condition deteriorated rapidly. She was transferred to the Intensive Care Department where her condition was described as "desperately unwell". Her organs were failing, she had respiratory failure and renal failure. She was being given different drugs in an attempt to keep her blood pressure up. Despite all endeavours, Shomi died at 20.00 hours on 26th October 2004.

Steven Alexander Wiseman

2) On 21st December 2004 Steven Alexander Wiseman, then aged 30, was admitted to Aberdeen Royal Infirmary in a seriously ill condition. Despite the best efforts of the

medical staff there he died at 12.16 that day. The cause of his death was subsequently determined at autopsy as streptococcal toxic shock. Prior to this illness he had been a healthy man, other than in respect of persistent eczema. On the evening of Tuesday 14th December he complained of feeling unwell and of pain in his upper left arm.. He continued to feel unwell and the pain in his arm increased. He was fevered. He was unable to eat but was taking fluids. By the Saturday he had not improved and had diarrhoea. His arm and throat remained sore and he had a fever. By Sunday he had not improved and had been ill in his bed since the Tuesday evening. At about 17.20 his fiancée Miss Robertson called NHS 24 and spoke to a nurse advisor who recommended that he contact his GP the following day. He was seen by his GP, Dr. Anderson, the following day who examined him, thought that he had flu and advised him to get back in touch if he had not improved within two or three days. At about 04.00 in the morning of Tuesday 21st December he was in such considerable pain that Miss Robertson contacted NHS 24 again and spoke to another nurse advisor. Mr Wiseman also spoke to him. He was in such pain that he had to crawl to the phone on his hands and knees. The nurse advisor was not aware of that fact. He recommended Cocodamol and Ibuprofen, and for Mr Wiseman to contact his doctor. He was concerned that if he suggested a doctor's visit, the doctors would countermand that until medication had been tried. Mr Wiseman continued to suffer pain to such an extent that Miss Robertson again telephoned NHS 24. She was worried about the pain and about Mr Wiseman's "funny colour". Miss Robertson spoke to a third nurse advisor. She arranged for a doctor to phone Miss Robertson within the hour. Dr. Fiona MacKay of G-Meds telephoned shortly thereafter. She recommended that Miss Robertson phone her GP surgery when it opened at 8.00am, which Miss Robertson did. Dr Mulcahy, Mr Wiseman's GP, attended at about 8.25 that morning. He was concerned that Mr Wiseman had requested a home visit because that was not like him.

3) When Dr Mulcahy arrived and saw Mr Wiseman he immediately decided that he needed urgent hospital admission by way of a 999 call. Just before the ambulance arrived, Mr Wiseman stopped breathing for a short period of time. Dr Mulcahy re-established his breathing and the ambulance crew were able to administer oxygen. Dr Mulcahy administered a broad spectrum antibiotic on the basis of his working diagnosis that Mr Wiseman was shocked secondary to infection. Mr Wiseman was then taken by ambulance to Aberdeen Royal Infirmary. The ambulance bringing Mr Wiseman arrived at 10.10 approximately and he was seen straight away by Dr Valerie MacLean, a specialist registrar in Accident and Emergency medicine. She was waiting for his arrival. He was clearly extremely ill, but awake. His blood pressure was very low and his peripheral circulation was shut down. He appeared to have a very severe infection throughout his whole system. He was given broad spectrum antibiotics but despite the best efforts of the medical staff, he died at 12.16.

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2. THE FATAL ACCIDENT INQUIRY

4) Fatal Accident Inquiries in Scotland are held under the Fatal Accidents and Sudden Deaths Inquiry (Scotland) Act 1976. Section 1(1)(b) of the Act provides that

where it appears to the Lord Advocate to be expedient in the public interest that an inquiry under the Act should be held into the circumstances of a death on the grounds, among others, that the death has occurred in circumstances such as to give rise to serious public concern, the procurator fiscal may apply to the sheriff for the holding of an inquiry. In this case, having regard to the fact that both Shomi Moshina and Steven Wiseman died having made repeated telephone calls to NHS 24 requesting medical advice and assistance prior to their deaths, the procurator fiscal took the unusual but in my view entirely appropriate step of applying for a joint fatal accident inquiry into the two deaths.

5) Section 6 of the Act provides, so far as relevant to this Inquiry, that the sheriff shall make a determination setting out the circumstances of the death so far as they have been established to his satisfaction and in particular (a) where and when the death took place, (b) the cause or causes of the death, (c) the reasonable precautions, if any, whereby the death might have been avoided, (d) the defects, if any, in any system of work which contributed to the death, and (e) any other facts which are relevant to the circumstances of the death. It can be seen from that that the purpose of the Inquiry held before me was restricted to the circumstances relating to the deaths of Shomi Moshina and Steven Wiseman. It was not a general inquiry into the workings of NHS 24. At an inquiry under the Act it is for the Crown and the other parties to call such witnesses as they consider appropriate, not for the inquiry itself to do so.

6) At the Inquiry the Crown was represented by Jonathon Ward, Procurator Fiscal Depute; the family of Shomi Moshina were represented by Mr Alexander Kemp, Advocate in Aberdeen; the family of Mr Wiseman were represented by Ms Christine McCrossan, Solicitor Advocate; Dr Neil Anderson and Dr Fiona McKay were represented by Mr David Holmes Solicitor and NHS 24 were represented by Mrs Valerie Stacey QC, instructed by Mrs Susan Murray, solicitor.

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3. NHS 24 OUT OF HOURS SERVICES and G-MEDS.

NHS 24

7) NHS 24 is a special National Health Service Health Board which covers the whole of Scotland. Its purpose is to provide medical and pharmaceutical advice on the telephone throughout 24 hours of the day. Its genesis so far as the out of hours service is concerned can be found in a problem which was identified in the mid 1990's when fewer and fewer doctors were willing to participate in out of hours working while, at the same time, more and more patients were seeking out of hours medical advice, sometimes for not very serious matters. One of the principal aspects of the design of the NHS 24 service is that when a patient phones NHS 24 the appropriate level of service for the patient will be determined by qualified nurses. These nurses are the first professional point of contact between the patient and NHS 24. The contact is made by telephone and the absolute first point of contact is the telephone operator, called a call handler, who is not a nurse. The system is set up to deal with the widest spectrum of medical enquiry from the most serious emergency, such as for example a heart attack or a stroke, through to simple advice in respect of

minor ailments requiring non prescription medication or even something as prosaic as the location of the nearest pharmacy. Medical matters are referred to the nurse who is known as a nurse advisor. The service is not intended to be a replacement for GP's during the day. During surgery opening hours patients can and should contact their own GP's surgery for advice, appointments, prescriptions etc. It is, however, the first line of access to all out of hours medical services except the emergency services. For present purposes "out of hours" is the daily period between 6.00pm on a weekday until 8.00am the following weekday, and between 6.00pm on a Friday until 8.00am on the following Monday. The out of hours service is not intended as a replacement for the 999 emergency service and the public are encouraged to use the 999 service if they consider that the condition is an emergency. NHS 24 will however deal with the calls which are of an emergency nature and if appropriate will themselves arrange 999 emergency admission to hospital. The public are still expected to arrange non-urgent medical appointments with their GP by telephoning the GP surgery during opening hours and similarly to contact the GP surgery for non-urgent home visits. During out of hours a person requiring urgent but not emergency medical advice should either telephone the NHS 24 national number or telephone his GP surgery number where he will either be diverted to the NHS 24 number or will be given an answering machine message to call that number.

8) When a person phones NHS 24 the call will be answered by a call handler whose first task is to assess whether the caller is looking for information, or whether he needs to speak to a nurse advisor. The call handler can also intercept obviously life threatening conditions and make an immediate diversion to the ambulance service. The call handler will obtain from the caller and will pass on to the nurse advisor demographic details and very basic information as to the reason for the call. It is then for the nurse advisor to speak to the patient or caller and determine the appropriate disposal. The call is recorded.

9) The recording of each call made in respect of Shomi Moshina and Stephen Wiseman was played to the Inquiry and a transcript of the conversation was produced. In fact there were two versions of the transcript available, one prepared on behalf of the Crown, and one prepared by NHS 24. Some of the passages on the recording were difficult to hear, and the transcripts occasionally did not agree with each other, but by and large the discrepancies were resolved by parties..

Triage and Nurse Advisors

10) The essential principle of NHS 24 out of hours service is that decisions as to the means, if any, by which a caller's future treatment should progress can be determined by a properly qualified and trained nurse. The dispositions range from home care, which could involve all sorts of advice, including the taking of medication of a type which does not require the involvement of a doctor, through advising that a doctor be seen within 36, 12 or 4 or fewer hours, to advising attendance at the G-Meds clinic set up to deal with referrals from the out of hours service, to contacting a doctor operating in the G-Meds Service with a view to the doctor seeing the patient at home, to advising attendance at Accident and Emergency and finally to the making of a 999 call for immediate ambulance assistance and admission to hospital.. This decision as to the appropriate disposal is reached by the nurse advisor following a telephone conversation during which the nurse advisor will have access to and will

use computerised programmes which are designed specifically to assist him or her in this task. The computer system will prompt certain questions and the responses to those questions will generate suggested outcomes. Ultimately however the final decision as to the outcome is that of the nurse advisor. Nurse advisors are Registered General Nurses, all of whom have undergone a 10 week period of specific training before they commence to take calls, followed by on the job training and mentoring. Clearly the communication skills of those selected to be nurse advisors are of the utmost importance as are skills relating to non visual observation and the eliciting of information by appropriate forms of questions. Nurse advisors are trained in the use of open as opposed to closed or leading questions. The value of answers to closed or leading questions can, sometimes to a very great degree, be undermined by the fact that closed or leading questions can limit the responses which are given to the particular terms of the questions and, in their most extreme form, invite only the one answer which the question itself suggests.

The use of Algorithms

11) Central to the system as operated by NHS 24 is the use of algorithms, that is formalised questions leading in series to other questions and to an ultimate preferred disposal. Dr. Bryan Robson, the Medical Director of NHS 24, spoke at some length in his evidence about these algorithms. Their use in systems of telephone triage is well established. They have been used in the United States of America for many years and more recently in the last 10 years or so in the United Kingdom. Initially, and for example in the USA, the algorithms were highly prescriptive, particularly where the telephone advisors might not have had much professional training or the background which the nurse advisors in NHS 24 have. Prior to becoming medical director of NHS 24, Dr. Robson was responsible for establishing the Scottish review of the American algorithms on which the Scottish algorithms are based. The review involved 60 or more other clinicians in Scotland. Their recommendation was that the algorithms were to be used as prompts, that they were to be logically structured, but that they did not require to be rigidly followed in all circumstances. They were however much more than guidelines. They were not there on a "take them or leave them" basis. Nurse advisors were not expected to stray far from the algorithms, but were not expected slavishly to follow them when it was obviously inappropriate to do so. Clearly an enormous amount of work has gone into the preparation of the NHS 24 algorithms of which there are 196. The paper version of these algorithms is extensive, running for example in the case of the Fever Algorithm alone to 117 pages, although not all are as long as that. The algorithms are operated through the use of a computer programme which runs on Windows operating software incorporating the use of drop down windows and multiple screens, so that more than one algorithm can be open at any one time. As the nurse advisor progresses through an algorithm she is prompted to answer on her computer screen questions relating to the condition of the patient. The answers will lead to further questions. Ultimately the algorithm itself will recommend a disposal. If at any stage the algorithm prompts a disposal of a 999 admission to hospital then it is programmed not proceed to later stages. The answers which the nurse advisor inputs to the computer can later be produced in the form of a call report..

12) At the end of the call the nurse advisor completes a form called " NHS 24 Clinical Referral/Notes" which identifies the patient and her GP surgery, the nurse advisor, a

summary of the patients condition and a note of the disposal. This is sent to the patients GP and also, at least in most cases, to G-Meds.

13) The Inquiry visited the NHS 24 centre in Aberdeen and was given an example of how a call would be handled through the use of the computer system including identifying and using the appropriate algorithm or algorithms for a patient. This was very helpful and clearly demonstrated the benefits of computer technology in such a wide ranging field as that in which NHS 24 and their nurse advisors operate.

14) Dr Robson was at pains in his evidence to stress that nurse advisors did not take the place of doctors. They do not seek to diagnose the patient's condition with certainty, but rather to determine what immediate disposal is appropriate for the ongoing care of the patient, including where appropriate the referral of the patient to a doctor on an urgent basis or indeed to hospital.

15) It has to be accepted that if a system of this kind is to be used the nurse advisors who are responsible for assessing the patient and determining the onward disposition of the case have to conduct their work subject to the handicap that none of the senses which could be brought to bear in a face to face consultation is available to them, other than that of hearing. They have to be skilful in their questioning to elicit sufficient accurate information from the patient to enable the algorithm to operate properly and to allow the nurse advisor to make an appropriate judgement as to the future progress of the patient.

16) At the end of the day, however, the question is whether that system was adequate to meet the needs of Shomi Moshina and Steven Wiseman and, if it was, whether it was operated properly and safely in each case.

G-MEDS

17) Since 1996 or thereabouts doctors in general practice have not as a rule provided the traditional practice based out of hours visiting service whereby the doctors in each practice would be on call on a rota basis to deal with requests from the patients of the practice for out of hours medical assistance. In its place the practices first operated co-operatives wherein they grouped together to provide such assistance on a group wide basis with doctors within the group of practices carrying out the work on a rota basis. With the alteration of the scope of duties of GPs negotiated in their new contracts the provision of this service ceased to be the responsibility of the GPs themselves and in or about 2004 became the responsibility of NHS Health Boards. From 1996 or thereabouts to November 2004 the GPs' co-operative for Grampian was known as G-DOCS. From November 2004 the provision of out of hours doctors services has been provided by NHS Grampian through a service known as G-Meds. This service has doctors stationed at a clinic in Aberdeen who will speak on the telephone to patients referred to them by NHS 24, will see the patients at the clinic, or if appropriate will visit such patients in their homes. NHS 24 communicates with G-Meds by e-mail sending Referral Notes form which in addition to the patient's demographic details contains the nurse advisor's clinical summary and the recommended action.

4. THE DEATH OF SHOMI MOSHINA

Meningitis and Meningococcal Septicaemia

18) The cause of Shomi's death was meningococcal septicaemia. Dr Kennedy explained the nature of meningitis, meningococcal septicaemia, and meningism. Meningitis is the condition of the membrane surrounding the brain (the meninges) being inflamed. Its most common cause is viral infection which is not a serious condition. An alternative cause is bacterial infection which is a potentially very serious condition. There are other, non relevant, types of meningitis which are not based on infection. The principal symptoms of meningitis are headache, fever, photophobia (a dislike of light) and a pain in the neck becoming stiffness in the neck, and in addition vomiting and a mental change varying from apprehension through confusion to coma. These symptoms are not all always found in all cases. Meningitis is not easy to diagnose and one requires to have a high index of suspicion for the condition, because it can be missed and can develop very rapidly. This high index requires people to be thinking about the condition, to enquire about symptoms that might support a diagnosis of the condition and to examine the patient carefully to identify signs. Actual observation of the patient is important, together with simple measurements such as pulse, temperature, blood pressure and repetitive breathing. In a telephone assessment it is therefore much more difficult to identify the condition or the potential for it.

19) The condition of meningism is one where the patient has features that would be consistent with meningitis but where a lumbar puncture, which is the definitive test for meningitis, is clear, and there is no inflammation of the meninges. The condition is also known as false or pseudo meningitis. It can only be determined by means of a clear lumbar puncture. It is a more common condition than true meningitis, and can be associated with numerous fevered conditions. Meningitis rather than meningism always has to be assumed, until meningism is confirmed which can only be done definitively by means of a test in hospital.

20) Meningococcal septicaemia occurs when meningococcus bacteria multiply in the bloodstream causing profound changes in the body, affecting metabolism, blood pressure (which will tend to drop), delivery of oxygen and nutrients to the organs, causing multi-organ dysfunction, septicaemia and shock. There is a tipping point when the treatment of the infection itself will not pull the patient back from the multi-organ dysfunction which is a consequence of the original infection. The distinguishing feature of septicaemia is the multiplication of the bacteria in the bloodstream. One of its classic symptoms is rigor, when the entire body shakes. This is a primitive protective response intended to raise the temperature, which the bacteria do not like. Meningococcal septicaemia in its classical presentation is not difficult to diagnose. The most dangerous meningeal condition is meningococcal septicaemia. Antibiotics are vitally important in the treatment of meningococcal septicaemia and meningitis. However, the giving of an antibiotic to a patient with meningococcal septicaemia can result in the toxins from the attacked bacteria being released into the bloodstream. When the organism is multiplying in the bloodstream as opposed to in the meninges, it causes a number of problems as it is borne round the body. It affects coagulation and causes metabolic upset, organ dysfunction. Even if the organism is destroyed its toxins are circulated round the body. It is a very serious condition.

Mortality rates

21) A patient suffering from meningitis, and who is not comatose when admitted to hospital, has good prospects of surviving, but could still die. Dr Kennedy assessed the mortality rate for such meningitis as being 5 to 10%.

22) Meningococcal septicaemia is an entirely different situation, and more serious. Dr Kennedy assessed the mortality rate from meningococcal septicaemia as being 25% to as high as 50%.

23) Both are therefore serious and potentially life-threatening diseases.

The telephone calls

24) I have already set out briefly the circumstances and content of the two telephone calls made by Shomi's family to NHS 24. Understandably a lot of time was spent at the inquiry on the content of these two calls and it is necessary to look at them here in some detail in order to determine the appropriateness of the conduct of the calls by the two nurse advisors

25) **The first telephone call** was made by Shomi's younger brother Anis Miah. When he arrived home from school Shomi was already home. She was sitting with a blanket around her and was complaining of a headache. Soon Shomi began to shiver very hard, so hard that when Anis put his hand on her shoulder, his hand started shaking as well. The last time he had seen her like this was in 1996 when she had developed meningitis. He phoned first the family G.P. and then NHS 24 and then passed the call over to his elder brother Kajal Miah. He was home because he had received a phone call from his mother at about 5pm while he was at work saying that she was really worried because Shomi was shaking and the father wasn't at home. When he arrived home, Shomi was sitting with her clothes on, wearing a jumper, and wrapped in two or more blankets. He was principally aware of her shivering. Her whole body was shaking and her teeth were rattling. She was hot to touch, quite feverish. She was, however, complaining about feeling cold. Mr Miah saw the similarity with the time when his sister had been rushed to hospital some years earlier and it had been ascertained that she was suffering from meningitis. He took over the telephone call with NHS 24 from his younger brother.

26) The nurse advisor on this call was Nurse Annie Gray who gave evidence to the inquiry.

27) The call handler in passing the call to Nurse Gray had said that the call was about Shomi Moshina and "apparently she's really cold and she's shivering and she won't stop shivering." This information had been given to her by Anis. When Mr Kajal Miah came on the phone he immediately told Nurse Gray that Shomi was wrapped in a blanket and that she was shivering and shaking. Nurse Gray asked to speak to Shomi and, before she did so, Mr Kajal Miah told her that Shomi had had meningitis a few years back. Nurse Gray spoke to Shomi and asked her if she had a headache or was vomiting, and was told that Shomi had a headache. She asked if Shomi could put her chin onto her chest and was told "sort of, that's a bit painful." She asked if Shomi had a rash and was told that she could not see one. Nurse Gray then advised

Shomi that when one's temperature was up, one could feel all over sore, have a slight stiffness to the neck and sometimes when bright light was switched on it can be quite sore to look at them, that these are also signs of meningitis, but that it was common for people with a fever to have similar symptoms and it was therefore important for her to take paracetamol and she should be feeling better in 30 minutes. Shomi then said that the headache was down the back of her neck and the nurse then said that she could hear Shomi shaking. Nurse Gray told her that it could be a simple virus or it could be the flu.. She told Shomi if anything worsened to call back or to tell her family to phone. She said that she would let Shomi's doctor know that she had had a problem and that if she needed to come back to NHS 24 she should give him a call. After the conclusion of that call, Nurse Gray considered that she should have perhaps spoken to the brothers about calling back; she tried to call herself but could not get through.

28) Nurse Gray, in her evidence, showed a clear familiarity with the computer systems and the use of algorithms. She said that it was not necessary to ask every question on the algorithm, that she used her clinical assessment skills to ask the appropriate questions to bring to light possible symptoms. She referred to the call report form which related to this call and which showed that she had used the fever algorithm. In the call report form, there was a question as to whether the individual had any of the following symptoms, namely stiffness of the neck with inability to touch the chin to the chest, severe pain in the eyes with exposure to light, intense headache, mental confusion, dullness or increased sleepiness. Nurse Gray had answered "No" to each of these questions. Further on in the algorithm the questions were asked as to whether the individual had any of the symptoms of heat stroke, namely a temperature over 40°C or shivering and chills. She answered these questions "No".

29) Nurse Gray said that she took from Shomi's answer concerning putting her chin on her chest that she could put her chin on her chest, but that it was painful. She hadn't thought at the time that the answer meant that she couldn't put her chin on her chest because it was sore. So far as the answer she had inserted relating to the headache, Nurse Gray said that if someone had a severe headache they would tell you they had an intense headache. She accepted that a question "Is your headache intense or severe" would have given a specific answer. She was clear in her own mind that Shomi's headache was not severe, and explained that if she had ticked yes to those questions then the algorithm would have recommended what she considered a clinically inappropriate end point to the call. She accepted that some of the questions in the algorithm were vitally important. She accepted that Shomi had said that she had been to sleep earlier in the day when she came home from school, but did not consider that that was necessarily indicative of increased sleepiness, being the question raised in the algorithm. She accepted that it was appropriate to err on the side of caution. She had not answered the question relating to shivering and chills in the affirmative because she thought it related to heat stroke which was not a factor. She accepted that the fever could be a symptom of a more serious underlying condition such as meningitis or meningococcal septicaemia. She said that if she ever thought that she was dealing with someone with a meningococcal disease that she would have despatched an ambulance straightaway. She said that if someone was presenting with some of the symptoms of meningococcal disease and she "was under no doubt at all" she would err on the side of caution and

summon a 999 ambulance. She said that she has used a combination of the algorithm and her clinical judgements. She considered that giving affirmative answers to the questions raised by the algorithm might have led to what she would have considered a clinically inappropriate outcome, for example, a 999 ambulance. At the conclusion of her evidence, she indicated that having completed the initial triage and taken the history and relevant information from the caller that you tended to have an idea as to where you were going with the call, of what the person is presenting with, and the treatment you are going to recommend, and that you then select your algorithm as a safety tool before making the final decision. She confirmed that the algorithm did not determine the outcome, but the nurse did using her skills, her experience and supported by the algorithms. She considered that there was a level of flexibility for the nurse

30) After the first call and the administration of paracetamol it is clear from the evidence of Shomi's brothers that her condition improved in the short term and that she brightened up. Later that night, her condition worsened, she was in pain, was cold, had a headache and was sick. She vomited a number of times. Ultimately she was vomiting but producing nothing. Her father wanted to take her to hospital but Shomi did not want to go, it could have been she did not feel able to go. She did agree to her father getting a doctor to come to the house and he accordingly telephoned NHS 24.

31) **The second call** was dealt with by Nurse Advisor Susan Duncan. Ms Duncan did not give evidence at the Inquiry. She produced a certificate signed by her doctor to the effect that she was suffering from a persistent fatigue syndrome, for which she had been treated since January 2004. Her symptoms were said to have deteriorated and the doctor said that Nurse Duncan "felt that she was not fit to give evidence in court and was unlikely to be fit to do so in the foreseeable future" and the doctor agreed with this. She provided an affidavit which is a competent form of evidence at a Fatal Accident Inquiry. She was not, of course, subject to cross-examination and I took that into account in determining the weight that I placed on various parts of her affidavit.

32) This call was received at approximately 04.30 on 26th October. In it Shomi's father Mr Chondon Miah explained to Nurse Duncan that his daughter had been vomiting a number of times, starting from about one o'clock in the morning, that she was fevered and hot to touch, and was shaking, that she was feeling something inside her, and feeling dizzy. Following this, Nurse Duncan spoke to Shomi. Shomi confirmed that she was feeling shivery and hot, that she had a sore head which was sore round the back and the front, that her neck was sore, that her arms and legs were sore as well, that she had been vomiting quite a few times, that her skin was burning and very hot. Nurse Duncan noted that Shomi had had meningitis in the past and then told Shomi that she was going to go through an assessment regarding the vomiting, to rule out anything else. In answer to questions Shomi told her that her arms and legs were painful and that she could not move, and confirmed that her hands and feet felt cold, and that her body felt really hot to touch, that she had pins and needles in her leg. She confirmed it was only one leg. Nurse Dunbar asked Shomi to check for a rash, telling her that it was really important to which Shomi responded that she could not see anything, and also that someone else - presumably her father - could not see anything. She said she could not put her chin

down on to her chest, and that it was sore when she tried to do that. She could tolerate light. Having been asked whether the head was sore just at the back she reiterated that it was sore at the back and round the front. At this stage Shomi asked the nurse if she could get a doctor, and was asked to repeat this. Nurse Duncan told her that she was trying to rule out anything too serious first. Nurse Duncan asked her about moving her legs and Shomi responded that she could in certain ways but her legs were sore. She said that her arms were the same and that she could move them okay. She had not had any bumps to her head, she felt dizzy both standing up and lying down. She felt dizzy as she spoke to Nurse Duncan. She was asked if she would manage to get up to see a doctor and asked could the doctor not come to her. Nurse Duncan told her it could be a few hours for a doctor to come out and it was quicker if she could get to the doctor as the doctor would only do home visits if it was a real emergency. Nurse Duncan asked Shomi if there was any way her dad could take her. Shomi said that she could not go out and that she would just wait. She repeated that what she would have to do was wait for the doctor to come. When asked why she could not manage she said that she did not know, that she was really sore around her neck and she had sore legs. She was told it would be a good few hours and by that time her own surgery would be open so that if she needed to get a doctor its really best that she gets up to see the doctor. Shomi asked how long she would have to wait and was told that if she went to the centre she would be seen straight away. She asked how long it would take for them to come to her and again was told it could take anything up to four hours and by that time her own surgery would be open. Nurse Duncan said that it was really important that Shomi be seen by a doctor. At this stage Shomi's father came back on the phone and Nurse Duncan told him that the quickest way was to get her up to the G-DOCS centre at the David Anderson Building. Mr Miah asked how he could do that when she could not get off the bed and the nurse told Mr Miah that Shomi had said that she could move. Mr Miah explained that he could not even get her to the bathroom. He explained that they had been sitting with her from 1.00 until now and asked her please to send someone. Nurse Duncan then said "If you let me explain we can get her seen by the doctor okay but for a doctor to come out it can be anything up to four hours.....its quicker to get her seen at the centre". Nurse Duncan tried to persuade Mr Miah that Shomi had said that she could manage. Shomi came back to say that she would not be able to go and Nurse Duncan finally said that she would have the doctor call back and that the doctor would decide what to do. She again said that she was trying to explain to Shomi that the quickest way was to get up to the centre and that it sounded as if she had flu-like symptoms, and normally she would manage to get up to the centre. Mr Miah came back on the telephone and was told by Nurse Duncan that she would pass the information through and arrange for a doctor to call back. She said that she did not know how long it would be and then said that if Shomi got worse Mr Miah should just call back again. She reiterated that it sounded as though Shomi possibly had flu-like symptoms, but that it was reassuring that she had no rash and could tolerate light. She invited Mr Miah to phone back if Shomi got worse, and said that the doctor would decide if he was coming out that day.

33) Nurse Duncan completed a clinical referral note wherein she set out that Shomi had been feeling cold and shivery since yesterday, had a headache, neck pain, had taken paracetamol and ibuprofen, had been vomiting frequently, that her arms and legs were sore, that she had pins and needles in her legs, was shivery but had no rash and was not photophobic, was speaking well but felt dizzy and unable to get up

due to pain in her arms and legs, that her father was very anxious and wanted her seen by a doctor, and that Shomi said she could not get to a centre as she could not move. She disclosed the previous medical history of meningitis and an allergy to penicillin. Her disposal was to speak to a doctor within one hour.

34) Nurse Dunbar used the vomiting algorithm. In the call report she noted a negative response to the questions relating to confusion or disorientation, to the question of stiffness of the neck with an inability to touch the chin to the chest, and that of an intense headache, and to the question as to whether the headache was worsening, non stop, and had come on like a thunderclap. The outcome of the algorithm on the call is stated to be "contact GP practice within 4 hours.(as soon as possible)"

35) The first 8 pages of Nurse Dunbar's affidavit deal with matters relating to her experience, her training with NHS 24, the way the system operated. She said that if she considered that a face to face consultation with a doctor was necessary she had been trained to encourage the caller to go to the out-of-hours emergency centre, because the light was better, and because the caller would probably be seen sooner. She said that in the case of a repeat caller she would be considering whether a face to face consultation with a doctor or possibly a 999 call might be required. In Shomi's case she chose the vomiting algorithm because vomiting appeared to be the major new symptom, and the one that had been causing concern, and because she knew that the initial questions would deal with possible meningeal illness which, she said, was always on her mind with every patient who may have relevant symptoms until she had ruled it out. She said that Shomi had told her that she could not lower her chin to her chest, as her neck was sore, but decided that she would answer yes to the question whether Shomi could put her chin to her chest because she understood that the reason Shomi could not do this was because of pain and not because of stiffness. When she had asked Shomi to check her body for any signs of a rash she had not made any mention of a stiff neck at that stage. She said that if she had answered yes to that question she thought it would have resulted in the algorithm prompting her to make a 999 call. She said that she asked Shomi whether it hurt across her forehead and that she answered yes; and that the vomiting algorithm prompted that question. Although the clear answer to the question which Shomi had given was yes, Nurse Duncan did not think it was appropriate to answer yes, because the line of questioning related to patients with glaucoma. If she had answered it yes it too would have generated a 999 call. She did not consider that a 999 call would have been appropriate taking into account the symptoms that she had at the time. She had initially considered the possibility that she might have meningitis but felt that she had excluded this by the end of the call. She advised Mr Miah that it would be best to try to get Shomi to the David Anderson Centre, and tried to persuade him to do that. Because she felt that the symptoms required GP contact within the next 2 hours, the quickest way left to her was to arrange for a GP to call her back. Interestingly she refers to her attempts to persuade Shomi to go to the David Anderson Centre as occurring "when negotiating with her".

G-DOCS involvement

Dr Watson

36) The outcome of Nurse Duncan's telephone call and Mr Miah's insistence was that the case was passed to G-DOCS in Aberdeen. Dr. Watson of G-DOCS received the information at approximately 04.55 He explained that at this stage there was no access to the patient's medical records and all that he would know was the information contained in the clinical summary that was passed to G-DOCS by NHS 24. He telephoned at about 05.00 and spoke to Mr Chandon Miah, and also to Shomi. He ascertained that there was some shaking and vomiting, but found it very difficult to get any specific symptoms. The father was very anxious and requested that a doctor be sent out. Shomi's voice was so faint that he could not make out anything she was saying. He felt that he couldn't get enough information to make a clinical decision that he would be happy with. He couldn't make up his mind clinically on the telephone as to what was happening. On that basis he arranged for a doctor to make a house call. His call to Mr Miah was made at approximately five o'clock in the morning.

Dr Mathieson

37) Dr. Mathieson arrived at Shomi's house at about 05.23. He carried out a full examination and found that her peripheral circulation was very poor. It was difficult to get a pulse, and difficult to take her blood pressure. Her heart rate was fast and her blood pressure was very low. Her condition suggested that she was shocked and that she had some collapse in circulation. He took some blood to see if Shomi was diabetic, which she was not, and examined her to see if there were any signs of meningitis. The tests for meningitis were negative. Shomi was very unwell but he could not identify any specific cause. He saw the priority as her admission to Accident and Emergency Department at hospital He did not administer any drugs, and in particular did not administer an antibiotic as he thought there were no signs of meningitis at the time that he first saw her. His priority was to get the patient to hospital where they would be better placed to check whether she was infected or not, and there would not be much delay in getting her to hospital. There was no sign of a rash, even in the good lighting in the ambulance. In cross-examination by Mr Kemp he indicated that if he had diagnosed meningococcal septicaemia he would have tried to give some antibiotics, but he had not had enough information to feel that the patient was suffering from meningococcal septicaemia. He had not suspected a meningococcal infection of any kind.

Aberdeen Royal Infirmary

38) Shomi was transported by ambulance to the Accident and Emergency Department at Aberdeen Royal Infirmary and met by a doctor. She received appropriate treatment there but, notwithstanding this, her life could not be saved and she died at 8.00pm on 26th October.

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5. THE DEATH OF STEVEN WISEMAN

Streptococcal Toxic shock

39) Mr Wiseman died of Streptococcal Toxic Shock (STS). Doctor Kennedy explained that STS develops from an infection with streptococcus pathogens which Doctor Kennedy described as a nasty organism if it becomes invasive, which in the case of STS it does. It can be invasive in a local sense, for example in a joint or, much more seriously it can be invasive in a wider sense in that it can become a blood borne infection which travels round the body. The toxins secreted by the streptococci can lead to multi-organ impairment and ultimately failure. One problem with the streptococcus is that when attacked by some antibiotics the organism on being killed releases its toxins into the host, causing further problems. It is a deadly disease having a mortality rate of 30% which will be substantially increased if the condition develops into necrotising fasciitis. The earlier the condition can be diagnosed the better the chances the patient has of surviving.

The telephone calls

40) As in the case of Shomi Moshina it is necessary to look at the telephone calls which were made to NHS 24 in detail.

41) All the telephone calls in the case of Mr Wiseman were initiated by his fiancée, Miss Kerry Robertson. In her evidence she explained that Mr Wiseman had returned home from work on Tuesday 14th December at the normal time feeling unwell, with a sore arm which he could move, and feeling flu-ey. His throat was also sore. He was not eating solids but was taking fluids. On Wednesday he was unable to go to work and felt ill. They thought it was the flu. On Thursday, Friday and Saturday he continued unwell, with no improvements and on the Saturday he had diarrhoea. Throughout this period his left arm was sore. He was feverish and falling in and out of sleep. He was unable to swallow properly. By the Sunday he was complaining that his arm was really sore. He also had a pain down the left side of his torso. Miss Robertson was getting worried and telephoned NHS 24 at about 5.30pm. She did this because Mr Wiseman was in a lot of pain and she thought he should be seen by someone.

The first telephone call

42) This call was taken by Nurse Advisor Sarah McArthur. She had not been cited to give evidence as she was on maternity leave. I was not told whether she was fit to give evidence or not. No affidavit sworn by her was produced. During the course of the first telephone conversation the Nurse McArthur, opened the substantive part of the conversation by asking Miss Robertson to confirm that Mr Wiseman had had flu-like symptoms for about a week. Miss Robertson advised the nurse that it had started off like that, had not got better, that Mr Wiseman had had sickness and diarrhoea as well, that he had not been out of his bed since the Tuesday, that he was achy, tender, and shivery, hot and cold, had only been drinking water, had a buzzy head, pins and needles in his arm, and a sore throat. He was coughing up a product with a horrible colour. Nurse McArthur then spoke to M.r Wiseman and asked him "and you're just feeling like you've got the flu, aches and pains, are your joints aching and things?" and Mr Wiseman indicated that one of his arms was sore

and the pain would not go away, that he had a job turning in his bed , that he felt "a right piner", that he was hot and shivery and that when he tried to drink water it brought up sickness. She told Mr Wiseman that it sounded as though he had a bad dose of the flu. She later confirmed that opinion to Miss Robertson, and confirmed that on two occasions later in the call. She suggested that Miss Robertson arrange an appointment with Mr Wiseman's GP. She told Miss Robertson that there was "No cure for the flu". Miss Robertson told Nurse MacArthur that Mr Wiseman's skin was a funny colour. Nurse MacArthur thought that that could be with him not moving about, or because he was going hot and cold. The outcome of the call with Nurse MacArthur was that she arranged to pass the information on to Mr Wiseman's GP. She told Miss Robertson that if Mr Wiseman wasn't settling down or if he was still feeling rotten the GP should be called. This was an appropriate outcome to the call, notwithstanding Dr. Kennedy's criticisms of some of its contents which I will deal with later.

Dr. Anderson's visit

43) Miss Robertson explained that Mr Wiseman had worsened and the pain in his arm would not go away, despite taking additional medication. She phoned the GP surgery the next day for a GP visit.

44) Dr Anderson visited Mr Wiseman in his home the following morning (20th December) at about 11.30. He told the Inquiry that he had examined Mr Wiseman thoroughly. His temperature blood pressure and pulse were reassuring. He recollected that the blood pressure was 110/65 which he considered to be within the normal range for a young man. Mr Wiseman had drawn his attention to his shoulder pain which he described as the sorest. He had specifically examined that area and noted that on deep palpation Mr Wiseman had found it uncomfortable. He did not detect any swelling or rash. He had concluded that Mr Wiseman was suffering from a viral infection, probably flu, and that the shoulder pain was caused by viral myalgia. He recommended that he take Paracetamol and Nurofen together to ease his symptoms. When he heard that Mr Wiseman had died the following day he was shocked that his condition could have deteriorated so quickly. He wondered if he had missed something

The second telephone call - content

45) Following Dr. Anderson's visit, Mr Wiseman's condition did not improve. By three o'clock in the morning he was in very great pain, saying that he was in agony. Miss Robertson decided to phone NHS 24 again. No nurse advisor was available and she was told one would phone back.

46) Nurse Advisor Paul Flynn phoned her. He opened the conversation by saying "It says here he's got flu, he's got pain down his left side." Miss Robertson told him that Mr Wiseman was in a lot of pain, that the doctor had been out, that he could not come to the phone because of the pain but, when Nurse Flynn indicated he really needed to speak to him, she got Mr Wiseman to the phone. Mr Wiseman confirmed that he had been sore for a while and that he thought he had the flu. He said that he was sore up his left arm and down his left hand, that his left side was sore, over his back and part of the front, that the doctor hadn't been much use, as he hadn't

seemed too concerned about the soreness, for five days he hadn't driven and hadn't walked and that he had just been sore. He said that lifting his arm up to his face was sore but his right arm was all right. Nurse Flynn noted that Mr Wiseman's breathing was a bit hard and asked if that was because of the pain which Mr Wiseman confirmed. Mr Wiseman told him that he could "hardly bear it if I'm moving about." Nurse Flynn excluded a number of other matters and advised Mr Wiseman that he probably did have the flu, that he should take Paracetamol on top of the Ibuprofen for the pain. He confirmed this to Miss Robertson and talked about bringing Mr Wiseman's temperature down. Miss Robertson advised that it was not so much the temperature, it was the pain which was constant. Nurse Flynn repeated his advice in respect of adding Paracetamol to Ibuprofen. He advised that if Mr Wiseman was not any better by the morning then they should contact his GP. He said it was difficult because Mr Wiseman was not very specific about where the pain was and Kerry told him it was his shoulder, and down his left arm and side which Nurse Flynn said sounded like muscular pain.

47) Nurse Flynn gave evidence. He was a Registered General Nurse of 23 years standing. He had worked extensively in various aspects of nursing. Most of his career had been in acute medicine. He had been in charge of the night or out-of-hours nursing at St. Bartholomew's Hospital in London and had been involved in setting up an out-of-hours nursing system at Northampton General Hospital. He had been involved in in-flight nursing both for scheduled air flights, air ambulances and in running his own business. He had been involved with NHS 24 in Glasgow since its inception there. When he called Miss Robertson he wished to speak to Mr Wiseman. He had been concerned about the call from Miss Robertson because it referred to left sided pain which gave him a high level of suspicion, as the pain could be cardiac related. He was always concerned when he was told that patients could not come to the phone themselves. He had been unaware that Mr Wiseman had had to crawl to the phone on his hands and knees. Had he known that that would have given a cause for concern. He had used the fever algorithm because the symptoms being described to him seemed non-specific. There was an algorithm for left arm pain but he had not used that. He had been trying to exclude potentially immediately life-threatening problems, and said that he was trying to ascertain what the true nature of the pain was. He did not think the pain was of cardiac origin and then moved down the index of suspicion. He had not been able to finish his questioning because Mr Wiseman had become too tired and had passed the phone to Miss Robertson. He thought that Mr Wiseman had been unwell for a number of days with what sounded like an upper respiratory infection, and that coincidentally he had had an injury, pain in his left shoulder, which, he said, Mr Wiseman had attributed to an injury at work. He thought the best thing would be for Mr Wiseman to see his doctor. He accepted that the thing which concerned Mr Wiseman and Miss Robertson most was the pain which was not being controlled by analgesia. He considered it very unlikely that Mr Wiseman would be given a home visit by a GP and thought the next best thing was for Mr Wiseman to maximise his pain relief and given him a worsening statement, namely to phone back if the condition changes or worsens. He agreed that from the records it seemed that Miss Robertson had been given similar advice two days previously, and was now getting exactly the same advice.

48) Nurse Flynn said that he knew from experience that Mr Wiseman would not get a home visit from a G-MED general practitioner if he sent the call down to them. He

believed that it would have been re-triaged by the G-MEDS' GP and that they would given the same advice namely to maximise the pain relief. He thought that by not contacting G-MEDS at this stage, but rather giving a worsening statement, it would mean that Mr Wiseman had done everything that was reasonable and, if he called back, G-MEDS might then become involved. In his words, G-MEDS "would have had less room to reasonably refuse a home visit." He believed that it happened commonly that notwithstanding that a case had been triaged by a nurse it was re-triaged when it got to G-DOCS or G-MEDS. He said that at this stage he thought it was necessary for Mr Wiseman to be seen by a GP, but from his experience he felt it very unlikely that the G-MED doctors would have felt similarly, or that they would have arranged a GP visit. He also over-rode the outcome from the algorithm which indicated seeing a GP within 36 hours. He accepted that he had not asked Mr Wiseman whether his condition had become worse since the doctor had seen him the previous day. That was an oversight. It was a question that he was in the habit of asking. His principal concern with Mr Wiseman was that if he had referred the matter to G-MED that it was almost certain that their GP would not have gone to see Mr Wiseman, and Nurse Flynn thought that that would not be right. He thought Mr Wiseman needed to see a doctor at least the following morning. He said that strict adherence to the outcome of algorithms could result in 999 calls in what were clearly inappropriate situations. In general if you followed the algorithm to the letter it could bring out a higher level of care than was required. He said that nurse advisors were asked to avoid home visits unless absolutely necessary. He later qualified that to the effect that avoid was perhaps too strong a word, and explained that they were asked to encourage visits to the centre because fewer doctors were doing home visits. He said that they were asked, if it was appropriate, to provide home care and to avoid unnecessary GP consultations to reduce the workload on them. He was directed towards the internal review document which had concluded of this telephone call that a home visit at the stage of the call (namely in the out-of-hours period) would have been the preferred clinically safe endpoint. He considered that that was written with the benefit of hindsight and the benefit of knowing the outcome. He had not thought that this was a life-threatening situation, and he thought that a consultation by Mr Wiseman with his own GP would have been a safe outcome. He stated that he considered that the two conditions, namely the respiratory infection and the pain in the shoulder were effectively independent of each other. Nurse Flynn had seen cases of septicaemia, normally of a meningeal cause, but had never come across streptococcal toxic shock. He considered that the call had followed a course which was not unusual for calls to NHS 24 and he did not think that he could have foreseen the outcome at the time of the call.

The third telephone call

49) This call was made by Miss Robertson to NHS 24 about 2 hours after the second call. Miss Robertson explained that her real concern, and why she made that call was the degree of pain that Mr Wiseman was suffering. The call was made about 05.30. Miss Robertson spoke to Nurse Julie Moore. Miss Robertson told Nurse Moore that Mr Wiseman had the flu, that he had had it since last Wednesday, the doctor had been out that morning, that he had a pain in his left arm, that it wasn't going away, that Mr Wiseman was in agony and that she was getting worried about him. Nurse Moore did focus her questioning on the pain and the fever. She was told that the left arm was swollen, and that his skin had a yellow tinge. Nurse Moore

enquired as to the whites of the eyes and Miss Robertson reported that they were yellow. Nurse Moore decided that she would get a doctor to call Miss Robertson back and reported the matter to G-MEDS. She told Miss Robertson that if she hadn't heard from the doctor within the hour to phone NHS 24 back. Depending on what the G-MEDS doctor said she advised that it would still be appropriate for Miss Robertson to contact Mr Wiseman's G.P.

Nurse Moore's evidence concerning the third call

50) When this call came in Nurse Moore was aware that there had been previous calls and she checked on the advice which had been given and noticed that the previous record had indicated that the complaint was flu, whereas the current complaint was shoulder or left sided pain which she considered was possibly a new symptom. On questioning she found out that the pain had been there for since the previous Tuesday. As the call progressed she became more concerned because of the yellowing of the skin and of the whites of the eyes. That concerned her more than the pain. It indicated jaundice but Mr Wiseman had no other clinical symptoms of jaundice. The symptoms were confusing and because of this she consulted with her team leader. She did not think that jaundice would have related to flu. It could not be alcohol because she was told that Mr Wiseman was tee-total. She knew she was coming to a disposal that would indicate seeing the G.P. the next day which she was not happy with and she wanted to increase the level of disposal to immediate contact with a G.P. She felt he needed to be investigated and wanted the G.P. to be aware of the jaundice. In a situation like this, erring in the side of caution, she would try to get the out-of-hours G.P. to see the patient or to call the patient. If Mr Wiseman had been able to travel she would have suggested that he come to Aberdeen. Even if Mr Wiseman had lived in Aberdeen she would have suggested an immediate contact with the out-of-hours doctor. She completed the clinical summary which appears in the G-DOCS document (page 67 of the Crown productions for Mr Wiseman) for 21st December 2004. This transmitted the information that Mr Wiseman had left shoulder, side and arm pain, had been taking painkillers, had been seen by his G.P., that he had a yellow tinge to his body, that the whites of his eyes were yellow and requested that the doctor speak to him within 60 minutes. She wanted a doctor to take the decision as to whether Mr Wiseman should be seen before the surgery opened, or could wait for his own G.P. She had not looked at the clinical summary that had been prepared by Nurse Flynn at the time of the second call. She had not known that a significant part of the second call had discussed shoulder pain. She confirmed that she had not put any information in the clinical summary which provided the doctor with information relating to the fever or the fact that Mr Wiseman had been in bed for 6 days.

Dr. McKay's telephone call

51) There is no verbatim record of Dr. McKay's call as calls to G-Meds were not recorded. Miss Robertson explained that the call had lasted 5 or 10 minutes, that she was told to give Mr Wiseman ibuprofen, and that the doctor had advised her to call the G.P. when the surgery opened at 8am. There had been no suggestion about Dr. McKay sending a G.P. out to call at the house. Dr. McKay had more or less described the symptoms which she had in front of her, and asked Miss Robertson if

that was the case. She had not got the impression from Dr. McKay that there was anything to worry about.

52) Dr Fiona McKay gave evidence. She explained that as far as she was aware if NHS 24 recommended a home visit then that would be done. It would be extremely rare for G-Meds to re-triage a NHS 24 decision. The request would be received, electronically printed off and faxed to the traffic controller. It wouldn't come to the doctor

53) Dr McKay said that all that she had received at G-Meds was the Referral Note prepared by Nurse Julie Moore. She knew from this the matters she wanted to investigate, namely the possible jaundice, the diarrhoea and the pain She spoke to Miss Robertson about these. She had not known that Mr Wiseman's condition had lasted for seven days or that there had been three calls to NHS 24 in two days. She had thought that Mr Wiseman might be suffering from viral hepatitis. She thought that he needed to be seen by a doctor but that it could be by his own GP when the surgery opened. She was reassured by the fact that he had been seen by his GP the previous day. Had she known the full history she might have thought that the patient needed to be seen by a doctor more urgently than when the surgery opened. She did not ask that the patient be brought to the centre because of his pain. At the time there were no facilities at Stonehaven.

Dr.Mulcahy's involvement

54) Miss Robertson phoned the surgery as soon as it opened. Dr Mulcahy, Mr Wiseman's G.P., was made aware of the call at an early stage, and after a phone call to Miss Robertson attended at about 0820. While he was there Mr Wiseman stopped breathing and had to be resuscitated. It is clear from all of the evidence that by this stage Mr Wiseman's condition had deteriorated to such an extent that he could not be saved. Dr Mulcahy summoned immediate ambulance assistance for an emergency admission to hospital and did what he could for Mr Wiseman.

Aberdeen Royal Infirmary

55) Mr Wiseman was taken promptly to hospital and seen by Dr. Valerie Maclean, a specialist registrar in accident and emergency medicine in Aberdeen Royal Infirmary who knew to expect him. Mr Wiseman arrived at the hospital about ten past ten. He was awake and was able to talk to Dr. Maclean. His blood pressure was extremely low. She inserted intravenous lines and gave him fluids. Thereafter he was given antibiotics. It was apparent that he was septic and had an infection, although the source of the infection was not clear. He was very peripherally shut down, with no blood flow to his extremities. She considered that he had a very severe infection throughout the whole system. He remained conscious for most of the morning but later lost consciousness and at 12.16 he sustained a cardiac arrest. Attempts to resuscitate him failed and life was pronounced extinct at 1240 hours on 21st December 2004.

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6. EXPERT WITNESSES

56) The families of Shomi Moshina and Steven Wiseman instructed Dr Diarmid Kennedy and Dr Jane Hunt to review the circumstances surrounding the deaths insofar as their own disciplines were concerned, to prepare reports, and to attend to give evidence to the inquiry.

57) **Dr Kennedy** is a fellow of the Royal College of Physicians and Surgeons in Glasgow and has for 28 years been a consultant in infectious diseases. Prior to that he lectured on infectious diseases, both at Glasgow University and Yale University. His discipline includes a very wide range of infectious diseases including meningitis, bacterial blood borne infections, shock syndromes and viral conditions. He is involved in the training of doctors in his department and also in the training of nurses. He gave evidence in respect of both deaths.

58) **Dr Hunt** is a registered general nurse, a registered sick children's nurse, a qualified district nurse, has a teaching certificate in nursing and holds a Ph.D degree in children's nursing. She has been nursing for 30 years in both clinical and senior management posts and has a very broad range of experience, predominantly working with children and young people, and in dealing with acute and chronic illnesses., both in the hospital and community setting. In addition, she has held academic posts. She supervises research work carried out by nurses undertaking post graduate masters degrees and tutors nurses up to degree level. She has been giving evidence as an expert witness for about 2 years prior to the date of the inquiry. She gave evidence on the question of telephone triage by nurses and on the telephone calls made in Mr Wiseman's case.

59) **Dr Bryan Robson** was called as a witness by NHS 24. He is a Member of the Royal College of General Practitioners He is employed by NHS 24 and was their medical director He had been deeply involved in the setting up of the service, and thereafter in its clinical management. In addition to the evidence which he gave on the service, its personnel, their training and supervision, and the development and use of algorithms in telephone triage he also gave opinion evidence concerning the handling of the two cases.

Post mortem examination

60) **Dr. James Grieve**, senior lecturer in forensic medicine at the University of Aberdeen and a qualified pathologist and fellow of the Royal College of Pathologists carried out a post mortem examination of Mr Wiseman and received reports from the toxicology department and the microbiology department in respect of samples taken. As a result of this, Dr. Grieve felt that the most tenable explanation was streptococcal toxic shock syndrome. .Dr Grieve and Dr. Kennedy had discussed the findings at autopsy and Dr Kennedy agreed with Dr Grieve's diagnosis as to the cause of Mr Wiseman's death

Dr Kennedy's comments on the first call -Shomi Moshina

61) In general terms, Dr Kennedy was critical of Nurse Gray's call. He was concerned that the shaking, which he described as amounting to a rigor was not given the prominence that it warranted. Rigor was often associated with bloodstream infection. He felt that the statement relating to general body pain should have been pursued further as to longevity and severity. He would have wanted to know whether the headache was increasing in severity. He felt she should have investigated further the issue of the ability to place the chin to the chest and the pain associated with that, and that she should perhaps have enquired about rotation of the neck. So far as the passage in the call when Nurse Gray goes through the symptoms such as temperature, soreness, stiffness of the neck, light, and said that they were also signs, but were also common symptoms for people with fever, he was concerned that the nurse was referring to meningism, or pseudo meningitis, and if a patient was possibly suffering from meningism that diagnosis should be made in hospital. He considered that the call showed a tendency to pre-judge the situation as one of pseudo meningitis; he did not agree with the assessment "sounds as though it is likely to be a simple virus" but indicated that Shomi had not really described anything that was consistent with a simple virus, especially with the existence of rigoring. The rigoring should have triggered concern. In Dr Kennedy's view, Shomi needed medical relief at the stage of the first call. He considered that the best outcome would have been to have gone to Accident & Emergency where she would probably have been given an antibiotic. If she had been given an antibiotic at say midnight and perhaps two to three hours after, Dr Kennedy was reasonably confident that Shomi's life would have been saved. From the information given in the call, Dr Kennedy was of the view that it was certainly not safe to exclude both meningitis and meningococcal septicaemia as being potential conditions from which Shomi was suffering at the time. He did not think the telephone call should have been terminated when it was, he felt there should have been more in-depth inquiry about the headache, the rigors, and that the call should have been terminated with a decision to seek medical contact, either by a doctor phoning her or visiting, by the patient visiting the 24 hour clinic or by the patient going to Accident & Emergency. He considered there was enough in this case to give concern that there was something more serious going on.

62) Dr Kennedy did not consider that the clinical referral notes arising from the first telephone conversation represented a reasonable clinical summary of the telephone call. It did not mention rigoring or shaking, it said "an anyway" when Shomi had complained of headache, neck pain and body pain, it said that she was unable to feel if she had a temperature when the focus of the phone call had been fever, and that the reference to slight headache was incorrect in that the headache wasn't slight, she had had it for three hours and there should have been further inquiry. There was nothing to suggest that it was slight. So far as the call report was concerned, he did not consider that the answer "No" to the question relating to stiffness of the neck was appropriate, he did not consider that the intensity of the headache had been sufficiently gone into to say that the headache was not intense. He commented on the negative question in respect of shivering and chills to the effect that there was more than that, there was shaking and rigoring.

63) In cross-examination by Mrs Stacey, senior counsel for NHS 24, Dr Kennedy confirmed that during the early stages of a meningitis type disease, a patient might present with a non-specific fevered illness for which at the early stage might not be

distinguished from influenza or other viruses, which could progress from that stage to a fatal condition in a short time, and that it could be difficult to diagnose meningococcal infection in some cases, in others it could be easy. Whilst he approved of Nurse Gray's sympathetic handling of the call, he remained concerned that within three hours of the first symptoms appearing, Shomi was rigoring, and had disclosed a past history of meningitis. Whilst rigoring by itself did not indicate an immediate emergency admission by ambulance to hospital it was indicative of a significant febrile process which had to be pursued. He considered that in cases of this kind consideration might be given to a call back by the nurse to see how the patient was progressing, rather than relying on the patient contacting the nurse. He was also concerned at the number of people who could become involved in an NHS 24 progress. He considered that later on the paracetamol which had been prescribed by Nurse Gray might have been suppressing the developments in the illness, but he understood why paracetamol had been recommended.

Dr. Kennedy's comments on the second call -Shomi Moshina

64)Dr Kennedy thought that this call from the outset showed what should have been an additional concern namely vomiting six or seven times. Vomiting is one of the features in meningococcal infection, it was a new event, and it showed that this was an evolving illness. It was a feature of deterioration. The confirmation that her neck was stiff indicated that the previous condition had not gone away despite taking analgesics (the exact quantity of analgesics taken is a matter that is not established). Dr. Kennedy thought there was evidence of cognitive impairment which was not properly followed up. The inability to move because of pain was a further development in the illness. Her body was hot but her feet were cold, and this to Dr. Kennedy indicated that she was beginning to manifest circulatory shutdown. To preserve blood supply to the essential body systems the blood supply to the peripheral parts of the body was being diminished. This was not a good feature. It would be consistent with shock, emerging shock and septicaemia or severe sepsis. This was a serious position to be in. The reference to pins and needles might, as a speculation, suggest a reduction in the blood supply to the peripheries. The negative answer to the question could Shomi put her chin on her chest, the reference to soreness since the afternoon, indicated that there was pain on flexion of the neck with similar considerations as was described in respect of the first call. He considered that by this stage Shomi must have been pretty ill and her request to get a doctor to the house probably indicated that she was fairly apprehensive. Looking at Nurse Duncan's comments about it taking a good few hours for a doctor to come there, and in retrospect knowing the outcome, he said that Shomi's only hope of survival at that stage would have been as rapid as possible admission to hospital. Being asked what the appropriate disposal would have been at that stage of the telephone call, from the information that had been communicated to the nurse, Dr. Kennedy thought she needed referral to hospital, if not by the parents car then by 999 ambulance. Shomi's reference to going to wait at the doctors' surgery was to him a bizarre comment suggesting that she was confused, although not necessarily persistently confused. It was evidence of cognitive impairment. The symptoms that were being described were not totally incompatible with influenza, but that was not his interpretation of them. He did not like the use of the term "flu-like" because it almost predisposed a diagnosis of influenza. There were however no respiratory features which one would expect. Commenting on Nurse Duncan's affidavit, he did

not agree that Shomi sounded alert, very alert and coherent. He said, in answer to a question as to whether it was appropriate to rule out from the assessment either meningococcal septicaemia, or meningitis, or any meningeal illness, that that could not be ruled out on the basis of the history given by the girl. He did not agree that despite the fact that the answer to the question about neck stiffness was "yes" that it was appropriate to answer "no" because the nurse considered that this was because of pain and not because of stiffness. Whilst he saw there were problems allowing algorithms to dominate a clinical inquiry, he had concerns about hearing what the patient was saying and then interpreting that in the contrary way. He considered that it was unsafe for Nurse Duncan to take the view that the reason Shomi could not put her chin to her chest was merely because it was sore. Early meningitis or meningeal inflammation would give rise to pain before stiffness. There was a spectrum from pain inflexion all the way through to stiffness. If the patient says, as Shomi did, "My neck is stiff" it was never safe to rule out the existence of neck stiffness. He did not understand the reference to glaucoma in the context of the enquiry about the headache. He said that the totality of the complaints were a cause for concern. The headache, the sore neck, the neck stiffness, the rigors, the vomiting, the paraesthesia, that all of this was concerning, and that it was not safe to say that the headache was not a cause for concern. He did not consider that the clinical referral notes where called to amounted to a reasonable clinical summary. The thing that leapt out at him was the reference to her "speaking well". Looking to the call report he did not agree that the patient Shomi was not showing signs of confusion. To all intents and purposes he thought she had neck stiffness. She had said that her neck was stiff. He did not think you could say that she had an intense headache because the headache was never gone into. Ultimately while Dr. Kennedy had no confidence that taking Shomi to hospital at this stage would have saved her life, her chances of survival would however have been improved by 10 to 25%. She could have been cared for by an expert in intensive care medicine. He agreed that it was at least possible that her life may have been saved had she been referred to hospital.

Dr. Kennedy's comments on the first call- Steven Wiseman

65)Dr. Kennedy considered that Nurse MacArthur had been too quick to make an assumption that the patient had influenza, that it had been made almost at the beginning of the call with Miss Robertson, that Nurse MacArthur had mentioned flu on eleven separate occasions or thereabouts throughout the call; there had been a rush to diagnose this simply because Mr Wiseman had fever and muscle aches. Dr. Kennedy would not have expected a fever to have lasted five or six days from the onset of symptoms if all that was wrong was influenza. Dr. Kennedy said, although in retrospect, that the cardinal features of the call were the joint pain in the shoulder, the joint swelling and the colour changes, and these were not focussed on enough. Influenza does not give colour changes, it does not give a sore shoulder or a sore elbow. The symptoms being described to that extent were not flu-like symptoms. Mr Wiseman's main complaint was his shoulder. He also thought that there was a tendency for the flu focus to be passed on to subsequent nurse advisors. He thought good practice would be to let the patient speak, to ask them what was wrong.

Dr. Kennedy's comments on the second telephone call - Stephen Wiseman

66) Dr. Kennedy considered that this call was the least satisfactory of all the calls. He noted that Mr Wiseman was focussing on how painful his arm was, his hand, his left chest wall, that he was describing breathing difficulty, and diarrhoea, that he was sleepy and had headaches. Dr. Kennedy thought there was a focus on influenza in the diagnosis, and again a tendency to suggest Paracetamol and Ibuprofen, although in a sense that might not be inappropriate because of the pain.

67) He was referred to both the Crown transcript and the NHS 24 transcript of this call. He was concerned that none of the factors which were being talked about were flu or flu-like - namely having a swollen arm, a red arm, a very red and painful arm. He did not consider that a nurse or even a GP could be expected to make a diagnosis of streptococcal toxic shock. The patient needed to be in hospital to have tests done for that diagnosis to be made. He did, however, think that people should have been looking for non-standard features and there were a lot of non-standard features here, even from the time of the first call. He considered that the appropriate action for the nurse advisor was to get an ambulance and get Mr Wiseman into hospital as quickly as possible. That was based on the symptoms disclosed in the telephone conversation. Dr. Kennedy accepted that it was difficult to separate hindsight out but, looking at the factors which were presenting at the time, and leaving aside the fact that the ultimate diagnosis was now known, he felt that hospital admission should have been the outcome at the time of this call.

68) In cross-examination by Mrs Stacey Dr Kennedy accepted that Nurse Flynn had been told that Dr. Anderson had diagnosed flu less than 24 hours earlier. He considered that that should have been noted, but it raised the question of why the GP's diagnosis and treatment or management had not resolved the issue. In other words, why was he still getting worse? It was the persistence of the illness which was concerning. You would not assume that the doctor was correct and therefore think no more about it, but equally you would not assume that the doctor was wrong. The nurse should take a fresh look at the whole thing and pursue it. He considered that 24 hours down the line after the doctor's visit (it was in fact less than that) with a telephone call in the middle of the night, and that that was one of the most important things of all for Nurse Flynn to take into consideration.

Dr. Kennedy's comments on the third call - Stephen Wiseman

69) Dr Kennedy's comment on this call was that with the flu like symptoms, fever, the severely sore, agonising, arm, the fact that Miss Robertson is worried, the swollen arms, the jaundiced appearance, Mr Wiseman should at this stage have been in hospital. Nothing had improved since the last call, which he considered should have been an urgent admission to hospital. Mr Wiseman's condition was now worse.

70) In cross-examination by Mrs Stacey Dr Kennedy accepted that Nurse Flynn had been told that Dr. Anderson had diagnosed flu less than 24 hours earlier. He considered that that should have been noted, but it raised the question of why the GP's diagnosis and treatment or management had not resolved the issue. In other words, why was he still getting worse? It was the persistence of the illness which was concerning. You would not assume that the doctor was correct and therefore

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Dr. Kennedy's views on Dr. McKay's call

71) Dr. Kennedy considered that the issue was the inconsistency of a strange combination of a severe sore arm and jaundice. This was a non-standard feature. He considered that Dr. McKay's telephone call had failed to elicit the relevant issues relating to non-standard aspects of Mr Wiseman's illness given that the non-standard nature of the circumstances. He did not consider that it was appropriate for Dr. McKay to have the patient wait until the surgery opened. He did consider that given what was known as to Mr Wiseman's condition 4 hours later that he probably would be beyond resuscitation at the time of Dr. McKay's call, nevertheless the chance was lost to attempt getting Mr Wiseman into a situation where he could receive expert care. It was possible, but unlikely, that he would have benefited from such care.

The evidence of Dr. Jane Hunt

72) Dr. Hunt had never been involved in telephone triage work, but did understand the system. On the general issue of telephone consultation she suspected that there was not going to be a choice between having a telephone consultation with somebody or a personal visit by a GP, by which I took it she meant that she accepted that telephone consultation rather than personal visits would be the way forward in the NHS in the UK, rather than the old system of home visits by doctors. I considered her to have extensive and useful general nursing experience. She did not have and did not claim to have any experience either in providing telephone triage nursing services or training other nurses to perform such work.

Dr. Hunt's views on call one - Shomi Moshina

73) Dr Hunt was critical of this call insofar as it related to Shomi's headache in that the reasons for that headache and the severity of it were not, to Dr. Hunt, sufficiently explored. And she had interesting observations to make as to research showing that there were different perceptions of pain from the standpoint of the patient and the standpoint of the nurse, and also as to methods of assessing severity of pain. Insofar as the pain in the neck or stiffness in the neck was concerned, she was of the view that there was a fine line to differentiate between pain and stiffness, and that it was difficult to assume that one necessarily differs from the other. So far as this call is concerned, she felt that as the call had been initiated by a member of Shomi's family, and not by Shomi herself, it might have been appropriate to seek to speak again to the member of the family, but she appreciated that there were different views on communicating with the family of a 17 year old. Her interpretation of the telephone call was that Shomi did have stiffness in her neck and was unable to touch her chin to her chest.

Dr. Hunt's views on call two - Shomi Moshina

74) Similarly Dr. Hunt was of the view that Shomi had specifically said that her neck was stiff, and was indicating in her answers that she could not touch her chin to her chest. She would have been uncomfortable reaching the conclusion, as Nurse Dunbar had done, that the reason Shomi could not touch her chin to her chest was because it was too sore to do so, particularly in a potentially fatal condition. She wondered whether had more rigorous assessments been made of the symptoms such as headache and neck stiffness, whether a 999 ambulance admission to hospital might have been suggested, rather than the arrangement that a doctor would telephone.

Dr Hunt's views on Algorithms

75) So far as the use of algorithms was concerned she pointed out that a single nurse could never be expected to have experience of every single condition that he or she may be confronted with, and that in a situation where one was dealing with a medical condition with which one was not completely familiar the algorithm could act as a check list and a guide, and could be quite strictly adhered to. On the other hand, if the nurse was more experienced, either in the use of algorithms or in the particular clinical field which was being dealt with, then the algorithm may be more of aide memoir. Ultimately she was of the view that the question as to whether or not a 999 ambulance admission brought out by an algorithm should be superseded or not depended upon the experience of the nurse who was dealing with the issue. She was concerned that many of the questions, such as those relating to neck stiffness and headache, simply allowed for the answer "yes" or "no" with no manoeuvre in terms of probing the answers more deeply. She had her attention drawn to the fact that in the NHS transcript of the telephone conversation the phrase "and my neck is stiff" did not appear. She was not sure whether she had heard these words herself when listening to the tape. She made the point that in giving her evidence on the content of the telephone call with Nurse Duncan, she had been looking to the content of the call as a whole, and not on individual pieces. This was consistent with Dr. Kennedy's approach of looking at the accumulation of factors and the total picture.

The evidence of Dr. Bryan Robson

76) I have already indicated the extent of Dr. Robson's involvement in the setting up of NHS 24 and there is no doubt that he was well qualified to speak to the system in operation.

Dr Robsons view s on the first call - Shomi Moshina

77) Dr. Robson gave evidence specifically relating to the algorithm used in this first telephone call and in respect of the transcript of the call. He explained that the algorithm had been developed in consultation with general practitioners rather than with specialists in the fields to which the algorithms related. He did not consider that the rigors referred to by Dr. Kennedy were of such importance as to be accorded greater precedence in the fever algorithm although he did concede that the reference to shaking in the context, apparently only, of heat stroke, was misleading. He was not prepared to attach the importance that Dr. Kennedy did to the issue of rigors in general, nor did he think it appropriate that the algorithm be reviewed by consultants

in the field. Whilst he accepted that someone in Dr. Kennedy's position might be a useful addition to the team in drafting the algorithm, he did not feel that the absence of such a person meant that there was a gap in the protocol. Dr. Robson would not have expected further questions relating to Shomi's complaint that she had pain all over her body, and he considered that, whilst with the benefit of hindsight one would have wished to ask questions about the severity of Shomi's headache in some detail, at the time the nurse advisor carried out a reasonable assessment of the patient. He felt that there was sufficient in the transcript to warrant Nurse Gray's decision that the headache was not severe. He said that that was also the opinion of the reviewers of the case. Dr. Robson was cross-examined closely on this point, particularly in the context within which the questions relating to headache appear, namely in the investigation of potential meningeal infection. He accepted this was a potentially life-threatening condition, but countered that by saying that a headache was a common symptom. His evidence was that it required the strong possibility of a life-threatening condition before even a doctor was involved, although he later reduced that to a possibility. He accepted that, from the evidence of the call transcript, he could not be absolutely sure that he could exclude the possibility of Shomi having stiffness of the neck and an inability to touch her chin to her chest. He provided the interesting view that a decision could be both clinically safe in respect of a patient but, in the result, entirely wrong in that the clinical safety related to the process being properly gone through rather than the condition of the patient. He considered that it might have been appropriate for Nurse Gray to have spoken to the other family members before concluding the telephone call.

Dr. Robson's views on the second telephone call-Sтивен Wiseman

78) Dr. Robson agreed with Dr. Kennedy that the previous history of the first call, the fact that a doctor had attended less than 24 hours before but that the patient was still phoning in the middle of the night was a relevant part of the history. The nurse should not allow that factor to overly influence the decision that had to be made. There had to be an assessment of the symptoms at the time of the call, and what the doctor had said previously should not overly influence the nurse's judgement. It was not the modern way that nurses simply deferred to doctors. He did, however, accept that both nurses and doctors could sometimes take false reassurance from what had happened in the past. He did not believe that Nurse Flynn had overly relied on Dr. Anderson's visit. Whilst the external body brought in by NHS 24 had concluded that a face-to-face assessment of the patient was desirable and that a home visit at this stage would have been the preferred clinically safe end point, NHS 24 had carried out a more detailed investigation and had heard Nurse Flynn's explanations, including his concern that triaged by the doctor if Nurse Flynn had not fully explored the maximum use of home care medication. NHS 24 considered this was a complicated situation. Doctor Robson considered that it would have been inappropriate to have recommended that Mr Wiseman, who lived in Laurencekirk, should attend the David Anderson Building in Aberdeen. He agreed that one would not expect a fever to be lasting for over 5 days without requiring some further assessment, and said that the algorithm was being changed to reflect that. Dr. Robson considered that in the case of Dr. Flynn's call, the due weight to Mr Wiseman's discomfort was not given, and that there was potentially an over reliance

on structure. He accepted that reading what should have been the correct answers to the algorithm in respect of medication to reduce temperature and looking at the underlying causes of a 5 day fever, should have brought out a higher outcome of the call. The algorithms were being changed to reflect this, but the level of the altered disposition had not yet been determined. He considered that it would have been perfectly possible for Nurse Flynn to have overridden the algorithm if he considered that there should be a referral to a doctor. Issues, such as the overriding of algorithms were picked up through normal reviews, they didn't form part of a regular audit of the organisation. The system allowed a nurse to override an algorithm, and the drop-down list provided an opportunity to the nurse to type in his reasoning in so doing. He didn't know of any reluctance on the part of nurses to override algorithms.

Dr. Robson's evidence on the third call - Steven Wiseman

79) Dr. Robson gave evidence as to what Significance Adverse Event Investigation Report said about this phone call. The external panel considered that the call was overly long and that nothing had been gained by its continuation after the decision to ask a doctor to telephone. They had, however, formed the clear view that a face-to-face consultation should have been organised, and that this was essential in the case. They considered that the decision to invite a doctor to make an initial telephone assessment of the need for a visit was not clinically unsafe, but did add potential, additional delays into the process. He explained that the external panel had not interviewed Nurse Moore, and that taking into account her information was that the outcome of the call namely the request that a doctor make contact with Mr Wiseman or Miss Robertson was an appropriate outcome at the time. So far as the clinical summary was concerned, he would not expect nurses to repeat what had been said earlier, particularly recent, medical summaries but would have expected Nurse Moore to have made some comment about the history of a flu like illness. However, the predominant symptom in this third call was one of pain, and the new important emergent symptom was one of jaundice or yellowing of the skin which were included in the summary. He explained that the clinical summary was information available to doctors but he did not expect doctors or others to make any decision solely on the information in the box, unless they are carrying out the recommendation therein contained

80) Dr Robson said that it was documented within NHS 24 that doctors would re-triage a nurse's disposal. The doctor would telephone the patient and further assess the patient. He agreed that proper communication between the nurse and doctor was essential. He agreed that a simple phone call by Nurse Flynn to G-DOCS may have solved the problem without further delay, and that there could have been a decision at approximately 2 am without the need for a third telephone call and a subsequent home visit, and that it could have been to the benefit of Mr Wiseman if a decision had been made at the stage of the second call. He advised that it had always been possible for nurses to phone G-MEDS before making a decision, but there had been inhibitions on both sides about doing so.

NHS 24's response to the deaths

81) Following the death of Mr Wiseman his family wrote to NHS 24 complaining about the way his case had been handled. I was told that the complaint was investigated and rejected, but no further evidence was led and no documents lodged in respect of this aspect of the matter.

82) NHS 24 lodged as productions a Significant Adverse Event Investigation Report for each of the deaths and one Summary Report in respect of both. These investigations were not triggered by the deaths, but by the decision of the Crown to seek a Fatal Accident Inquiry. They were instructed by Dr Robson. In each case, the investigating panel was comprised of NHS 24 employees although the advice of an external panel was sought in respect of the content of the telephone calls. None of the members of the investigation boards or the external panels gave evidence to the inquiry. Dr. Robson gave evidence on some parts of the reports, but he had not been involved in the investigation, and was doing no more than telling me what I could in any event have read from the documents. In these circumstances as no member of the investigation boards or of the external panels had spoken to the investigation and the reasons for the conclusions reached, and as the investigators had not had their opinions tested by cross examination, I did not consider that the content and conclusions of the reports had been established by the evidence. In the circumstances I could attach little weight to the reports and I derived little assistance from them save in respect of the recommendations which they made, on which Dr Robson provided useful evidence.

83) The reports contained a number of recommendation in the form of an action plan for changes in the NHS 24 operation. Doctor Robson pointed out that in an investigation of this kind the opportunity is taken to have a wide ranging review whereby areas were identified where it is felt that improvement could be made, even though the areas were not relevant to the significant adverse events themselves. Accordingly he said it would not be right to take the summary of recommendations produced by NHS 24 as a list of faults which they accepted had existed in their systems at the time they were investigating the cases of Shomi Moshina and Steven Wiseman.

84) The action plan produced by NHS 24 has 14 recommendations under the broad headings of Organisation, Training, Algorithms, People, Partners and Investigation Process. The recommendations were all accepted for action, responsibility for carrying out the recommendations was allocated and by the time of the conclusion of the inquiry the great majority of the recommendations had been implemented.

85) The organisational recommendations related to the call review process and the clinical summaries produced at the end of calls.

86) So far as training was concerned, there were recommendations relating to the need to focus on the clinical needs of the patient; the need to raise awareness of early non-specific symptoms of meningitis; the need to consider onward referral of patients who repeatedly call in respect of the same episode of illness; the regular review of training in the use of algorithms; the need to ensure that proper training is given in respect of potential false reassurances and serious warning signs or situations; and the need to incorporate lessons from the two fatalities into the staff awareness and training programme.

87) So far as the algorithms were concerned, there were recommendations that NHS 24 should review its quality and governance arrangements to ensure that the algorithms remained of the highest clinical standard, and that the specific algorithms used in each of the two cases be considered with a view to possible improvement and further training in their use.

88) So far as the personnel concerned in the two cases were concerned, it was recommended that they receive individual feedback.

89) So far as partners within the health service were concerned, the need to revise and improve feedback mechanisms between different partners as to the appropriateness of decision making was identified. There was also a recommendation that the mechanisms for sharing information and learning from events, including lessons to be learned from complaints, should be developed and improved.

90) Finally it was recommended that some elements of the processes for investigating complaints and for conducting Significant Adverse Event analyses should be revised, including the screening of complaints to identify whether they disclosed such an Event.

91) By the conclusion of the inquiry Dr Robson was able to say that all of these matters had been implemented or were in the process of being implemented, or ongoing reviews were in place.

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7. SUBMISSIONS

92) I had the benefit of full written submissions from the parties. It is unnecessary to set them out in detail here, and they can, I think, be fairly summarised as follows.

Submissions for the Crown

93) The Crown submitted that one of the major weaknesses inherent in the NHS 24 system of operation was the fact that it attempted to triage patients over the telephone. They said that it was the very fact of telephone triage that explained why the illnesses of Shomi Moshina and Steven Wiseman were so badly underestimated. Nurse advisors have no recourse to their other senses. There were weakness in the communication skills of the nurse advisors as manifested by the use of leading questions leading to major symptoms being overlooked or explained away, communications training at the beginning of the nurse advisor's career did not go far enough and should be supplemented by continued formal training and assessment throughout the nurse's career. The Crown submitted that there was a problem with repeat callers having to provide the same information, and that those in the system, or using it, should be aware of the entire patient history, and that consideration be given to "red flagging" to repeat callers to give them priority, and perhaps an

automatic higher outcome. They submitted that the algorithm system should be reviewed so that the fear of triggering an inappropriate outcome be removed.

Submissions for the family of Shomi Moshima

94) Mr Kemp, for Shomi Moshina's family submitted that there were reasonable precautions whereby the death might have been avoided. Firstly, at the stage of call one, it would have been reasonable at that stage to arrange for an out-of-hours visit by a general practitioner within 4 hours and this whether one approached the issue as applying the principal of the worst case scenario, or the principal of erring on the side of caution. He submitted that that precaution was also supported by the NHS fever algorithm. So far as the second call is concerned, Mr Kemp accepted that the absence of Susan Dunbar from the enquiry limited the assistance that could be gained from her affidavit evidence. Having reviewed the contents of the call and Miss Dunbar's affidavit evidence in respect of it, he submitted that the clinically appropriate outcome of that call should have been the calling of an ambulance, resulting in Shomi's admission to hospital at approximately 5 am with at least the possibility that her death might have been avoided even at that late stage.

95) Turning to the systems of work, Mr Kemp submitted that the responses of Doctor Watson and Doctor Mathieson were entirely appropriate as were the actions of the ambulance staff and the medical staff at Aberdeen Royal Infirmary. He submitted that the fever algorithm was not adequate to catch the symptoms of meningococcal septicaemia namely rigors and reduced blood flow to the extremities. He submitted that the training of the nurse advisors, for what was an extra-ordinarily difficult role, and that their communication skills were not sufficiently developed. The cautious approach which was necessary was not evident. This was not really due to a failing of individual nurses but evidence of a defect in the system. Further training of nurse advisors was therefore necessary and further research into how these skills could best be developed should be recommended.

Submissions for the family of Stephen Wiseman

96) Miss McCrossan, for Mr Wiseman's family accepted the difficulties inherent in telephone triage. She referred to the readiness with which flu was wrongly diagnosed, and whilst critical of Nurse Advisor Flynn's handling of the second telephone call, and in particular his apparent immediate acceptance of flu as the underlying condition leading to a failure to arrange a G.P. referral, she saw these failures as a consequence of the system used by NHS 24. In particular she was critical of the way algorithms were used to exclude life-threatening conditions, and the apparent discouragement of home visits. She was critical of the information that was passed on by NHS 24 to Doctor Mackay of GMEDS which she submitted was far too brief with insufficient information relating to the persistent fever and swelling in the shoulder. This may have led to Doctor Mackay not instructing an immediate visit by a doctor, or even an immediate hospital referral. She submitted that as presently directed the NHS 24 system was more "an administrative holding bay till the surgery is open next day" than an actual provider of a service. She was critical of what she saw as the early encouragement of all calls, without proper investigation, towards self administration of fever reducing and analgesic medication, of the

emphasis in all calls for the need to give patients re-assurance which could be misplaced, that the algorithms appeared only rarely to provide the "GP 1" outcome.

97) So far as reasonable precautions were concerned, she saw the use of algorithm as an option available for a nurse, rather than as a central part of the call structure. There should be a genuine policy of erring on the side of caution, coupled with less emphasis on patient re-assurance, homecare, and what she characterised as "rote excluding of potentially life-threatening conditions". She referred to the potential for introducing nationally accepted procedures and to the desirability of maintaining the same nurse advisor for each patient on repeat calls. She suggested that the reporting of calls, and the information given to GMEDS and received by G.Ps from GMEDS should be more comprehensive, and that consideration should be given to advising patients to call at the out-of-hours centres. She suggested that consideration be given to installing a nurse at such centres. She expressed concern as to the apparent lack of accountability as she saw it on the part of NHS 24 for its actions and NHS 24's inadequate responses to Miss Robertson and Mrs Scott's expressions of concern concerning Mr Wiseman's treatment.

Submissions on behalf of Doctors Anderson and Mackay

98) Mr Holmes was necessarily much more focused as the involvement of Dr Anderson and of Dr Mackay in Mr Wiseman's case was very limited. Essentially his submission was that judged against the standards of a competent doctor exercising reasonable care in the discharge of his professional duties, (the *Hunter v Hanley* test) they could not be criticised.

Submissions on behalf of NHS 24

99) Mrs Stacey's submissions on behalf of NHS 24 set out the organisation of the service, the role of nurse advisors and their training for that role including the use of algorithms, the involvement of doctors through G-MEDS, and the summary of recommendations and action plan which NHS produced following their Significant Adverse Investigations Reports.

100) So far as the case of Shomi Moshina is concerned, it is submitted (1) that there were no reasonable precautions which NHS 24 or any of its employees could or should have taken which would have resulted in a sufficiently early diagnosis of a meningitis spectrum disease and subsequent treatment which might have saved her life and (2) that her death was neither caused nor contributed to by any defect in any system of work operated by NHS 24.

101) In respect of the death of Steven Wiseman it is similarly submitted (1) that there were no reasonable precautions which NHS 24 or any of its employees could or should have taken which would have resulted in a sufficiently early diagnosis of streptococcal toxic shock syndrome and subsequent treatment which might have saved his life and (2) that his death was neither caused nor contributed to by any defect in any system of work operated by NHS 24.

102) At the closing submissions on 15th March 2006, Mrs Stacey commented at some length on the submissions made by the other parties.

8. CONCLUSIONS

103) There was no dispute at the inquiry as to the place, time and cause of the death of Shomi Moshina or of the death of Steven Wiseman. The procurator fiscal's petition accurately narrates the time and place of the death of Shomi and the cause of her death, and the time and place of the death of Mr Wiseman and the cause of his death. These matters are set out in my formal determination which is appended hereto. The real focus of the inquiry was on the issues contained in Section 6(1)(c) and (d) of the 1976 Act namely whether there were any reasonable precautions whereby either of the deaths might have been avoided, and whether there were any defects in any system of working which contributed to either of the deaths

104) In considering these issues I found the evidence of Dr. Kennedy to be of great assistance, being thoughtfully and lucidly expressed, and the reasons for the opinions which he had formed being clearly explained. It was correctly pointed out by NHS 24 in their submissions that notwithstanding Dr. Kennedy's experience as a consultant physician in infectious diseases, he had no recent experience as a general practitioner, and no relevant experience of telephone triage. That did not, in my opinion, detract from the value of his opinions as a senior doctor on the issues which need to be addressed in this Inquiry namely the reasonable precautions, the defects in any system of working, and any other facts which are relevant to the death. Dr. Kennedy was well able to explain what the requirement would be of any medical practitioner, including nurses, handling a call and being charged with determining what the future disposal of the treatment of that caller should be. Dr. Kennedy did not expect the nurses to know the answers to the problems with which either Shomi or Mr Wiseman presented. He did, however, expect them to know that something unusual was going on, to recognise that they did not properly understand what that was, and to take steps to see that the patient was dealt with by someone who was more likely to know what was going on. He was also well qualified to speak on the quality of the questioning by the nurse advisors and the interpretation given to some of the answers.

105) Dr. Robson is a general practitioner of some year's experience who, for a considerable time, has had a special interest in the provision of out-of-hours services other than by doctors. He has been involved in the development and introduction of NHS 24 into the health care system, and thereafter has been responsible for its clinical management, and for the introduction of the telephone triage system and the associated development and use of algorithms. I found his evidence on those topics very helpful. Until very recently he was closely involved in the continuing operations of NHS 24, being the medical director. He was responsible for instructing the investigations into the deaths once he became aware that a Fatal Accident Inquiry was to take place. I do not consider that he can truly be said to be independent of NHS 24, or to bring an independent mind to the questions which were being looked at in the Inquiry. In saying that, I do not doubt his honesty. I cannot however accept the opinions which he gave in respect of the handling of the calls or of the conclusions of the internal inquiries which he instigated as being sufficiently objective to be relied upon.

106) Where there are conflicts between the evidence of Dr. Kennedy and that of Dr. Robson in respect of the quality of the advice given by a nurse advisor, the general

conduct of a telephone call by a nurse advisor or the conclusions or disposals reached by the internal inquiries, I in general prefer the evidence of Dr. Kennedy.

107) Dr Hunt is a highly qualified nurse with a wide range of experience in both the practical and the academic fields of nursing. Although she had no direct experience of triage work I found her evidence of nursing practice and her review of the two calls relating to Shomi to be very helpful

The system of telephone triage

108) One of the submissions made by the Crown was in the following terms:- "One of the major weaknesses inherent in NHS 24's system of operation is the fact that it attempts to triage its patients over the telephone". As Mrs Stacey for NHS 24 correctly pointed out, telephone triage as practiced by NHS 24 is not a weakness or defect in the system, it is itself the system. It is a system which has been put in place to deal with the problem which I highlighted earlier of there being more and more demands being placed on the NHS for out-of-hours service, coupled with a reduction in the number of GP doctors willing to participate in the provision of out-of-hours GP cover. This reduction in the number of doctors willing to provide the service has ultimately been reflected in the new contracts under which GP's operate whereby they are not required, as part of their GP duties, to provide an out-of-hours service. Clearly therefore, alternative procedures required to be put in place. The decision taken by the managers of the National Health Service in Scotland was that out-of-hours work should be dealt with by nurses triaging patients over the telephone with the assistance of a series of algorithms with the availability of onward referral to a doctor or to the 999 service if that was appropriate. NHS 24 is the body which provides this out-of-hours service to the public. As its name suggests it also provides other services on a 24 hour a day basis.

109) As described to me by Doctor Robson, it seems a well thought out system intended to make best use of the resources available including the use when necessary rather than as a first port of call, of a general practitioner.

110) It would be unrealistic to expect any set of algorithms to be a one hundred per cent foolproof system of diagnosis for any individual patient presenting with any particular set of symptoms. It was however clear from the evidence that the algorithms were the product of extensive research and consultation with a wide variety of healthcare professionals, with contributions from over 60 clinicians including some consultants. In addition the contents of the algorithms are regularly monitored in order that they can be improved in the light of experience.

111) The other crucial part of the system is the work of the nurse advisors. These nurse advisors are all experienced registered general nurses who have been given specific training for their new role in NHS 24. They have been trained in the use of algorithms. They have also been given specific training in the communication skills which are necessary to the task of obtaining sufficient information from the patient to enable the nurse advisors to operate the appropriate algorithms and, using them and their own clinical judgement, to determine how the patient should progress through the system. To do this properly and safely they do not need to diagnose the patient's condition, although in many cases they may do this. What they need to do with the

assistance of the algorithms is to identify sufficient of the patients signs and symptom to enable them to decide whether they can themselves advise the patient or whether they need to involve a doctor, and if so with what degree of urgency. In addition they need to be alert to the possibility that they have insufficient information to make this decision, or that the patient is presenting with non standard signs and symptoms which are not covered by the algorithms. They are taught to carry out their work on the basis of erring on the side of caution.

112) I am satisfied that the system of telephone triage by well qualified and properly trained nurse advisors using algorithms as a primary tool and working on the basis of erring on the side of caution is an efficient, well thought out and potentially safe method for the provision of out of hours service and that it is not inherently defective. In any given case however its effectiveness and safety are to a very large extent dependent upon the quality of the clinical judgement of the Nurse advisor. In all cases a strict adherence to the principle of erring on the side of caution is essential.

Failures in the system

113) Notwithstanding the foregoing, it is tragically clear that the system failed both Shomi Moshina and Steven Wiseman. In each case it failed to identify that the patient may have been suffering from a serious and potentially life-threatening disease, when in each case the patient was. In each case from an early stage there were indications that the patient was potentially seriously ill, or was suffering from a condition which was not being properly identified by the algorithms, and that potentially serious non standard symptoms were developing. In each case had these signs and symptoms which were presenting been properly identified, or the fact that they could not be properly understood been itself identified, there is a strong likelihood that each of the patients would have survived.

114) Each of the five telephone calls spoken to by Doctor Kennedy was in his opinion in some way defective I have set out his evidence more fully above and I accept his evidence in respect of each of these calls.

115) In the case of Shomi Moshina, the first nurse advisor effectively sought to exclude meningism when such a condition could only be excluded in hospital; she consequently failed to appreciate the seriousness of certain of the responses being given by Shomi to her questions, and she intentionally noted as Shomi's answers the direct opposite to the answers which Shomi had given. She did this because of her confidence in her own clinical judgement. As a consequence she failed to summon appropriate medical help for Shomi. She did not err on the side of caution.

116) The second nurse advisor can be criticised as to the content of her call, in her use of the algorithms, in her incorrect noting of Shomi's responses to questions, and in her failure to summon an ambulance. It may be that by the time of the second call Shomi's life was beyond saving, but any small chance their might have been had she been immediately admitted to hospital at this time was lost. The second nurse advisor can also be criticised for what seem to be almost desperate attempts to avoid a home visit by a doctor. She did not err on the side of caution.

117) The first nurse advisor in Mr Wiseman's case moved too quickly to a diagnosis of flu and ignored matters such as the longevity of the fever and the increasing shoulder pain. In her case that is a minor criticism as she advised an early contact with Mr Wiseman's GP.

118) The second nurse advisor carried on the flu diagnosis and failed to appreciate properly Mr Wiseman's predominant condition, and the reason for the call, namely the agonising and disabling pain that he was subject to in his shoulder. He did not follow the outcome which his own limited and wrong investigation had generated because he did not consider that the doctors at G-MEDS would act upon it. From the information given in that call Mr Wiseman should have been admitted to hospital then. He did not err on the side of caution.

119) The third nurse advisor in Mr Wiseman's case while identifying the non-standard nature of the symptoms, the fact that they were continuing and intensifying, and the fact that they were now linked with apparent jaundice failed to attach sufficient importance to them. She failed to appreciate that in the circumstances the safe outcome should have been the admission of the patient to hospital immediately. Although she arrange for a G-Meds doctor to call, the cautious disposal would have been immediate hospital admission. However admission at that stage would have been unlikely to have saved Mr Wisemans life.

120) In addition to the content of the telephone calls there was criticism of the content of the Clinical Referral/Notes. That did not seem to me to be a separate problem, but rather to be the consequence of the unsatisfactory nature of the conduct of the calls which gave rise to the referral notes.

121) It was obvious from the evidence of each of the three nurse advisors who appeared before the inquiry that they were hard working and committed professionals who took their job seriously. There was no suggestion that they were thoughtless or careless in the way they carried out their work, or that they were anxious to finish the work and did not allocate the proper time to it. I have no reason to believe that the other two nurses who did not give evidence adopted anything other than a similar responsible approach to their work. Nonetheless, each of them, in one way or the other, failed in the proper implementation of the system.

122) Although I was told that nurse advisors were trained in questioning techniques the questioning by nurse advisors in furtherance of the algorithms seemed to me to be superficial. Obvious questions were not asked, follow up questions were not asked, closed or leading questions were asked bringing about answers which were perhaps what the questioner wanted or at least expected to hear, and assumptions were made which were not based on what the patient had actually said. Accurate information was not obtained and potentially dangerous conditions were not identified. This problem was sufficiently widespread in the telephone calls as to indicate a possible insufficient level of training in what is a crucial skill.

123) Looking to the evidence relating to the telephone conversations as a whole, it seems to me that there is a tension between the proper use of the algorithms, which are to an extent prescriptive in nature, and the proper use of professional discretion on the part of the nurse advisors. The clear impression which I have is that the nurse

advisors felt free to exercise their clinical discretion to the extent of disregarding outcomes produced by the algorithms if they considered that the outcomes were incorrect. In this case that resulted in either referrals to doctors or referrals to 999 emergency admissions not being made because the nurse advisor did not consider it appropriate, although the algorithm, left to itself, would have produced such an outcome. It seems to me that perhaps the nurses had an over high evaluation of their own clinical expertise, when compared with the contents of the algorithms which had been produced by very senior and experienced medical professionals including consultants. In saying this I recognise that clinical judgements are important, but I think that Dr Robson's evidence on the balance between algorithms and clinical judgement should be given attention. He said (para 11), following the recommendations of the review team that introduced algorithms to NHS 24, that algorithms should be used as prompts, were to be logically structured. Though they did not have to be slavishly followed in all cases if it was clearly inappropriate to do so, they were more than mere guidelines, and nurse advisors were not expected to stray far from them. That approach would be consistent with erring on the side of caution. That is not the standard which the nurse advisors were in fact applying in these cases.

124) I have considerable sympathy for the nurse advisors in this regard. While they were encouraged to rely on their clinical judgement they do not appear to have been given clear guidance either as to when they might consider superseding an algorithm outcome or the procedures which they should use when so doing. In cases of potentially serious illness it seems to me unacceptable to allow matters to be determined on the basis of a nurse advisor's professional judgement without being satisfied that the nurse advisor has the clinical skills to warrant that. There was no examination of nurse advisors and no formal means of assessment which would enable NHS 24 to be objectively satisfied that each nurse advisor did indeed have the ability training and expertise to exercise her clinical judgement properly and safely before she assumed her duties. Thereafter there was no ongoing formal assessment of the performance of each nurse advisor in discharging the difficult and demanding duties of the job. There was no formal structure in place to assist the nurse advisor in deciding in any given case whether it was appropriate to depart from algorithm outcomes.

125) I do not consider that it can be right for a nurse adviser intentionally to insert a wrong answer to a question posed by an algorithm with a view to ensuring that the algorithm does not produce an unwanted result. It must be preferable for the correct answer to be given and the reason for not accepting the unwanted disposal to be given also.

126) I do not consider that it is for me, on the basis of the evidence which I heard, to say where the boundary should lie between the implementation of an algorithm outcome and reliance on professional discretion. I expect that that boundary will be different depending on the algorithm, the patient and the nurse in question. Consideration should however be given to devising a formal system to ensure so far as can reasonably be done that algorithm outcomes are not overridden save for clear and identified reasons; that the ability of nurse advisors to make that decision should be tested before they are allowed to do so, and should thereafter be regularly reviewed. The occasions when the outcomes are overridden should be recorded

together with the reason and overrides should be regularly monitored. In cases where a 999 hospital admission or an urgent consultation with a doctor is concerned consideration should be given as to whether the concurrence of a supervisor should be obtained before such an outcome is overridden.

127) The position of Doctor Watson, who became involved for G-Docs in Shomi Moshina's case is instructive when compared with that of the nurse advisor who had reluctantly been persuaded to arrange for a doctor to call. On phoning and speaking to Mr Miah and Shomi Doctor Watson was aware that Shomi was shaking and vomiting, but he felt he couldn't get enough information to make a clinical decision as to what was happening. He immediately arranged for a doctor to make a home visit. That approach is entirely consistent with that of Doctor Kennedy and in my opinion is a proper reflection of the "err on the side of caution" approach.

The Doctors involvement

Dr Anderson's involvement

128) Dr Anderson examined Mr Wiseman but found nothing seriously worrying. He found his pulse, temperature and blood pressure to be normal. Mr Wiseman had told him that he had aches and pains and that those were worst in his left shoulder. He said that he had examined Mr Wiseman's shoulder by palpating it and that Mr Wiseman had found the examination to be uncomfortable. He considered that Mr Wiseman had flu. Mr Wiseman himself when speaking to Nurse Flynn less than 24 hours after the examination had said that the doctor hadn't seemed too concerned about the soreness and had suggested exercise. Dr Kennedy, against the background of the known cause of Mr Wiseman's death only 25 hours later, considered that the normality of the results of the examination were surprising, that he would have expected at least tenderness rather than mere discomfort would have been found and that the absence of significant clinical features was unexpected. Dr Kennedy considered that the severe pain was not standard and was not a symptom of flu. While one might have expected a doctor to inquire into the history of the pain and in particular its longevity and the degree of its severity, and to ascertain that Mr Wiseman's principal complaint for days had been his pain, it is not clear that Dr Anderson appreciated the fact that Mr Wiseman had been suffering the pain in his left shoulder for 5 or 6 days and that this had become severe. Dr Kennedy did not criticise Dr Anderson's examination of Mr Wiseman. There is no doubt that at the time of that examination Mr Wiseman was suffering from a very serious condition from which he died about 25 hours later, that Dr Anderson failed to identify that condition or at least that Mr Wiseman had non standard symptoms that merited further examination. Further examination in hospital at that time might and probably would have resulted in Mr Wiseman's life being saved. There was however no evidence led before me to the effect that Dr Anderson's examination was defective in any way. On the basis of the conclusions which he came to at the end of that examination it cannot be said that it would have been reasonable for Dr Anderson to have arranged for Mr Wiseman to be admitted to hospital at that time.

Dr McKay's involvement.

129) Dr McKay's involvement was limited to the reading of one Clinical Referral Note from NHS 24 dated 21st December and her telephone conversation with Miss Robertson. She had not noticed that the Note which she saw made reference to two earlier calls. She was accordingly unaware of the history of Mr Wiseman's illness, the fact that he had been in bed for almost a week, had made 3 calls to NHS 24, and that the pain referred to in the NHS 24 Note was so severe as to be disabling. She structured her conversation with Miss Robertson on the basis of the information contained in the one Note. Had she been aware of the other matters she would have wanted Mr Wiseman to be seen by a Doctor more urgently. By this time however Mr Wiseman's illness had progressed to a point where it is unlikely that his life could have been saved.

Communications between NHS 24 and G-DOCS/ G Meds

130) There was concern expressed on the part of NHS 24 witnesses that doctors at G-Meds would re-triage referrals which recommended the patient being seen by a G-Meds doctor. It is not for me to determine whether the G-Meds doctors should or should not re-triage patients but each side should be fully aware of the others position. More importantly some Nurse advisors clearly believed that they should avoid recommending home visits by G-Meds doctors. I was told by Dr Robson and by the doctors operating in G-Meds that this was not in fact the case. No NA should feel constrained about recommending such a visit. Such a constraint would fundamentally undermine the essential principle of erring on the side of caution.

131) Both Dr Watson and Dr McKay gave evidence to the effect that the only NHS 24 Clinical Referral Note available to each of them was the form generated in respect of the final phone call between the patient and NHS 24 which had given rise to the referral to G-DOCS/G-Meds. Dr Watson said that when the Nurse advisor dealt with the matter the outcome would be forwarded to the patient's GP practice for incorporation into the patient records, but not to G-DOCS. In Shomi's case the form did not indicate whether the call was a first or subsequent call. By the time of Mr Wiseman's case the form had been changed to show at the top and in small print whether the call was a first call or, if not, the number but not the content of previous calls. Dr Robson gave evidence to the effect that when a patient was referred to G-DOCS or G-Meds all the relevant Clinical Referral Notes were e-mailed, not just the last one.

132) The availability of the earlier NHS 24 Clinical Referral Notes to the G-DOCS/G-Meds duty doctors in either of the cases would not have prevented the deaths and accordingly I have not referred to this aspect in my determination. Clearly however it must be in the patients interest's that the doctor on duty at G-Meds has the fullest possible information before either visiting or phoning the patient. All the Notes prepared by the nurse advisors in respect of the patients current treatment should be available to the duty doctor at G-Meds at the time of the referral.

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DETERMINATIONS

FATAL ACCIDENT & SUDDEN DEATHS INQUIRY (SCOTLAND) ACT 1976

A. The death of Shomi Moshina

(1) Shomi Moshina who was born on 10th October 1987 and resided at 4 Springbank Terrace, Aberdeen died within the intensive care unit at Aberdeen Royal Infirmary, Foresterhill Road, Aberdeen at 2000 hours on 26th October 2004.

(2) The cause of her death was meningococcal septicaemia.

(3) The reasonable precautions whereby the death might have been avoided were:-

(a) The admission of Shomi to a hospital by means of a 999 ambulance call made by the nurse advisor at the time of the first telephone call by Shomi's brothers. This would almost certainly have resulted in her surviving her illness.

(b) Failing (a), a decision by the nurse advisor at the time of the first call to have Shomi seen by a doctor immediately would have been likely to have resulted in her admission to hospital and her life would almost certainly have been saved.

(c) A decision by the second nurse advisor at the time of the second telephone call to have Shomi admitted to hospital by means of a 999 ambulance call would have allowed Shomi to have received appropriate medical treatment even at this late stage of her illness. Whilst this might possibly have saved her life, it cannot be said that it was likely to have done so.

(4) The following defects in the system of working operated by NHS 24 through their telephone triage system contributed to Shomi's death:-

(a) No clear guidelines or instructions were issued to nurse advisors as to the extent to which algorithms or protocols should be followed and the extent to which a nurse was entitled to exercise his or her clinical judgement not to follow an outcome brought about by use of the algorithm.

(b) Nurses were allowed in the purported exercise of their clinical discretion to answer questions posed by the algorithms in terms which were directly contradictory of the answer given by the patient.

(c) Nurse advisors felt that they were discouraged from involving doctors during out-of-hours periods and there was a belief among some that doctors might re-triage calls to avoid an out-of-hours visit.

(d) The questioning by nurses in furtherance of the algorithms was superficial with the result that obvious questions were not asked, closed or leading questions were asked, assumptions were made, full information was not obtained from the patient and potentially dangerous conditions were not identified. The system of training nurses for the work of nurse advisors, and the supervision of them in the conduct of their calls may have contributed to this failing.

B. Steven Alexander Wiseman

(1) Steven Alexander Wiseman, who was born on 18th June 1974 and who lived at 2 Garvock Street, Laurencekirk, died on the 21st December 2004 at 1240 hours within the Accident & Emergency Department of Aberdeen Royal Infirmary, Foresterhill Road, Aberdeen.

(2) The cause of his death was streptococcal toxic shock.

(3) The reasonable precautions whereby the death of Mr Wiseman might have been avoided include:-

(a) Had the second nurse advisor, at the time of the second call, identified the many non-standard features of Mr Wiseman's condition including his prolonged fever, the intense and disabling pain in his shoulder, the fact that he was deteriorating and his red and painful arm, and arranged for his immediate admission to hospital by means of a 999 ambulance call, such an admission at this stage might have saved Mr Wiseman's life.

C. Defects in the system of work

(a) No clear guidelines or instructions were issued to nurse advisors as to the extent to which algorithms or protocols should be followed and the extent to which a nurse was entitled to exercise his or her clinical judgement not to follow an outcome brought about by use of the algorithm.

(b) Nurse advisors felt that they were discouraged from involving doctors during out-of-hours periods and there was a belief among some that doctors might re-triage calls to avoid an out-of-hours visit.

(c) The questioning by nurses in furtherance of the algorithms was superficial with the result that obvious questions were not asked, closed or leading questions were asked, assumptions were made, full information was not obtained from the patient and potentially dangerous conditions were not identified. The system of training nurses for the work of nurse advisors, and the supervision of them in the conduct of their calls may have contributed to this failing.

Aberdeen July 2006

JK Tierney

Sheriff of Aberdeen