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Date and Time	Source of Document/Evidence	Description of Evidence	Event/Activity
10th May 2021	TRFT Evidence folder	Consultation Information Sheet	A detailed report of Yusuf's medical encounters at The Rotherham Foundation Trust (TRFT) starting from 10th May 2021, aged 3 years old, specifically the Asthma Specialist.
13th November 2022	Evidence bundle 1	Family timeline	'*Yusuf had a high temperature and was generally feeling unwell.'*
14th November 2022	Evidence bundle 1	Family timeline	*'In the evening of the 14th, Yusuf began complaining of a sore throat. Yusuf was unable to swallow solids, and was only drinking sips of water.'*
14th – 28th November 2022	TRFT Evidence folder	Weekly Clinical Rota	Staff rotas 14th – 28th November 2022.
14th November 2022	SCH Nursing rota 14 - 23 Nov 2022	Medical week commencing 1.11.222	Nursing rota.
15th November 2022	TRFT Evidence folder	ED Staffing rota	Exported data from the TRFT Emergency Department (ED) staffing rota.
15th November – 18th November 2022	SCH Zip file 2616 Document request 01 ED wait time / Bed stats	Bed stats	SCH nursing rota and ED waiting statistics.

Date and Time	Source of Document/Evidence	Description of Evidence	Event/Activity
15th November 2022 12:36	GP / YMN correspondence	GP consultation	First recording of GP Consultation.
15th November 2022	Evidence bundle 1	Family timeline	*'Yusuf's mum requested an appointment with the GP. Upon arrival, she discovered the appointment had in fact been made to see a nurse. The nurse prescribed Yusuf with a 5-day course of antibiotics and diagnosed him as having tonsillitis.'*
15th November 2022 23:04	GP correspondence	111 NHS call	111 log for Yusufs mum's concerns – 111 advise to attend ED at TRFT.
15th November 2022	Evidence bundle 1	Family timeline	*'In the evening of the 15th, Yusuf was taken to the Rotherham General Hospital A&E department by his mum due to breathing difficulties.'*
15th November 2022	Evidence bundle 1	Family timeline	*'Whilst at the ED, Yusuf suffered from four episodes of severe breathing difficulty (see A&E CCTV footage).'*
15th November 2022	Evidence bundle 1	Family timeline	*'After witnessing Yusuf having his third episode, whilst in the waiting area, another patient expressed her concern and went to seek help without Yusuf's mum requesting her to. J returned stating that the nurse said "if the mother is concerned, she can bring him to the reception, we are busy".'*
15th November 2022	Evidence bundle 1	Family timeline	*'Yusuf's mum then took Yusuf herself to the nurse station and had tried to describe the breathing/choking episodes Yusuf was having. She expressed the level of difficulty Yusuf was experiencing with his breathing. The nurse*

Date and Time	Source of Document/Evidence	Description of Evidence	Event/Activity
			responded with "yes he is snoring. We have other people waiting, we can't just get a doctor, what do you want me to do.""
15th - 16th November 2022 00:52am	TRFT evidence folder / scanned medical records	Nurse's account of interaction with Yusuf's mum	Nurse's account of interaction with Yusuf's mum.
15th November 2022	Evidence bundle 1	Family timeline	*'Yusuf's mum then returned back to the waiting area, and then again to the nurse station after the fourth breathing episode. Now, mum explained that she is not complaining about the waiting time, she would just like someone to see Yusuf whilst he is having these breathing/choking episodes. To this the nurse responded, "I am not arguing with you".'* There is no account from the nurse's perspective on this occasion documented.
15th November 2022	Evidence bundle 1	Family timeline	*'Yusuf's mum then asked for the nurse's name and was refused several times. After being consistently ignored, she called her brother,* [Yusuf's uncle], *to come and help, and then went back into the waiting area.'*
15th November 2022	Evidence bundle 1	Family timeline	*'*[Yusuf's uncle] *arrived at the A&E department at approximately 2am. He raised his concerns regarding Yusuf's health at the nurse station and asked for help.* [Yusuf's uncle], *was told "We don't have any doctors available. We only have 1 doctor who takes care of all the children, and after midnight he also takes care of all the adults".* [Yusuf's uncle], *then expressed the extent of Yusuf's breathing difficulties. The nurse's response to* [Yusuf's uncle's], *concern was, "So are other children, you will have to wait, you will be waiting a while."* [Yusuf's uncle], *then asked why the nurse was refusing to give her name. The nurse then gave her first name, and also said they did not need to provide their names.'*

Date and Time	Source of Document/Evidence	Description of Evidence	Event/Activity
15th - 16th November 2022 01:37am	TRFT evidence folder / scanned medical records	Nurse's account of interaction with Yusuf's uncle	Yusuf's uncle had spoken with the ED Nurse Sister on duty, no documents from the ED Nurse Sister on duty were recorded. Only the same nurse who triaged Yusuf.
15th November 2022	Evidence bundle 1	Family timeline	*'Approximately half an hour later, Yusuf was provided a bed in the A&E department for monitoring. In this time, only Yusuf's oxygen was monitored approximately 3 times throughout the night. His breathing episodes still continued and were not observed by staff throughout the night.'*
15th November 2022	Evidence bundle 1	Family timeline	'*Yusuf was seen by a doctor between 5 – 5:30am on Wednesday 16th November 2022. Upon examining Yusuf's tonsils, the doctor was extremely shocked, stating "that's horrible, the worst case of tonsillitis I have seen". He then went on to explain the severity of his tonsillitis. As the breathing episodes being experienced by Yusuf whilst he was in the waiting area were not observed by a nurse or doctor, Yusuf's mum described these to the doctor, to which the doctor reassured mum that this is normal and can take time to settle. The doctor was also informed of Yusuf not being able to eat or drink. The doctor prescribed another 5-day course of the same antibiotic but of lower strength, as he stated that the initial 5-day course alone was not sufficient. Yusuf was sent home.'*
16th November 2022 05:33	TRFT Evidence folder	Scanned Medical Records	Doctors' medical assessment.

Date and Time	Source of Document/Evidence	Description of Evidence	Event/Activity
15th November 2022	Evidence bundle 1	Family timeline	'*When attempting to give Yusuf the medication he was occasionally able to take if, but most often he struggled and would spit it out.'*
16th November 2022	TRFT Evidence folder	ED Staffing rota	Exported data from the TRFT ED staffing rota.
17th November 2022	TRFT Evidence folder	ED Staffing rota	Exported data from the TRFT ED staffing rota.
18th November 2022	Evidence bundle 1	Family timeline	'*After no improvement, and no food/little drink being consumed, Yusuf's mum made another appointment with the GP.'*
18th November 2022 11:22	TRFT evidence folder GP	Yusuf's GP consultations	This is the 15th and 18th November 2022, GP summary of the consultation of Yusuf.
18th November 2022	Evidence bundle 1	Family timeline	*'Yusuf was seen by the GP at approximately 11:30am. The GP checked Yusuf's tongue/tonsils, and listened to his chest. He explained Yusuf has severe tonsillitis and needs IV antibiotics. He insisted that Yusuf should be taken to the A&E department by the evening if there is no improvement in his condition. Yusuf's mum requested to be referred to the children's ward at RGH, but was told by the GP that they are unable to do that, and she needs to go to the A&E department. Yusuf's mum then insisted to the GP that if he knows Yusuf needs IV, then why can he not be referred. The GP persisted that they would need to go to A&E. Yusuf's mum then asked how long she should wait until taking him the A&E, to which the doctor responded, "By the evening, I wouldn't wait any longer than that". No respiratory assessment conducted (i.e., oximeter).'*

Date and Time	Source of Document/Evidence	Description of Evidence	Event/Activity
18th November 2022	Evidence bundle 1	Family timeline	'[Yusuf's uncle], *then called […] and was transferred through to the children's ward at RGH.* - [Yusuf's uncle], *first spoke to a nurse, whom then put him through the nurse in charge.* *- He explained to the head nurse that Yusuf urgently needs help. The GP has said that Yusuf needs IV antibiotics.* - [Yusuf's uncle], *begged and pleaded for him to be able to bring Yusuf to the ward, but he was told "we don't have any bed or doctors available, I can't just get a bed out of the air"* - [Yusuf's uncle], *persisted with pleading for help, expressing how Yusuf is struggling to breathe and is very unwell. To this, the head nurse responded, "so are other children, you need to bring him to A&E* - [Yusuf's uncle], *then asked "what if I can get a doctor to call you and refer him directly?", to which the head nurse responded, "No, we have instructed all GP's to send referrals and patients to the A&E".* *- Feeling helpless,* [Yusuf's uncle], *had no other choice but to end the conversation there.'*
18th November 2022 12:35:58	Evidence bundle 1	Evidence bundle 1	18/11/2022 12:35:58 18/11/2022 12:46:01 MOC 00:10:03. Yusufs uncle's mobile provider evidence of the phone call he made to the hospital to ask if Yusuf could be admitted directly to the ward.
18th November 2022	Evidence bundle 1	Family timeline	*'As a final resort, Yusuf's mum and* [Yusuf's uncle], *decided as no other option is available, we should call 999. Mum called the ambulance on*

Date and Time	Source of Document/Evidence	Description of Evidence	Event/Activity
			Friday 18th November at approximately 1pm as he was struggling to breathe.'
18th November 2022 12:59	SCH evidence folder / Full EMS records / history sheet / ambulance sheet	Ambulance records	Ambulance sheet.
18th November 2022	Evidence bundle 1	Family timeline	'*The paramedics arrived, carried out the observations, and put Yusuf on oxygen immediately as he was struggling to breathe.'*
18th November 2022	Evidence bundle 1	Family timeline	*'The paramedics planned to take Yusuf to RGH. Mum requested for Yusuf to be taken to Sheffield Children's Hospital (SCH). The paramedics refused, and said "we are not a taxi service". Yusuf's mum called* [Yusuf's uncle], *to inform him of this.* [Yusuf's uncle], *spoke to the paramedics on the phone loudspeaker and demanded for Yusuf to be taken to SCH.* *The paramedics once again repeated that they are not a taxi service and can only take patients to the closest hospital. They also suggested "you can take him yourself, but he needs oxygen".'*
18th November 2022	Evidence bundle 1	Family timeline	'[Yusuf's uncle], *then called 999 to ask about his rights, as he did not want to ask beyond what he can. He explained the conversation he had with the paramedics, and was told by the 999 operators that the paramedics must take them to their (patient's) chosen hospital or arrange a means of getting there for them.'*
18th November 2022	Evidence bundle 1	Family timeline	'*After* [Yusuf's uncle], *explained the 999 call to the paramedics, the paramedics then took Yusuf and Mum to the SCH, to the A&E department.'*

Date and Time	Source of Document/Evidence	Description of Evidence	Event/Activity
18th November 2022	SCH file Nursing rotas 14-23	Nursing rotas 14-23 Nov 2022	Excel spreadsheet with every staff member on duty in the Emergency Department.
18th November 2022	TRFT Evidence folder	ED Staffing rota	Exported data from the TRFT ED staffing rota.
18th – 23rd November 2022	SCH file pharmacy / drug chart	Pharmacy Drug chart	Yusuf's medication charts.
18th November 2022	Evidence bundle 1	Family timeline	*Arrival at Sheffield Children's Hospital (SCH)* *'Upon arriving at SCH, Yusuf was immediately given a bed in the A&E, and was observed by a doctor. Soon after, Yusuf was seen by several doctors, whom all stated that Yusuf has severe tonsillitis. All doctors having examined Yusuf were surprised regarding the severity of the condition of his tonsils.'*
18th November 2022 14:48	SCH Zip file 2616 Document request 01 History Sheets Accident and emergency Ambulance sheet	ED card Accident and Emergency Triage notes	Weight 15.8kg Triage category C. Chief complaint: Common complaint shortcut list, difficulty breathing temp:27.2 Pulse 100 RESP:38 SA02 89 BP/ Not recorded AVPU:A POPS 3 pain score 0. ED triage notes
18th – 21st November 2022 12:00	SCH file clinical notes referred to in email.	Medical notes	These are the medical notes handwritten from the medical clerking – 18th November 2022,16:40 – 21st November 2022.

Date and Time	Source of Document/Evidence	Description of Evidence	Event/Activity
18th November 2022 16:40	SCH Zip file 2616 Document request 01 History Sheets / General medicine	Clinical Notes	Clinical Notes SCH several health professionals' clinical notes. Starting with medical clerking.
18th November 17:20	SCH evidence folder Full EMS / nursing and charts / nursing documentation	Admission to ward start of nursing documentation	Nursing notes commenced at 17:20 18:30 IV canular in sit bloods taken, commenting throughout the shift that Canular is working well.
18th November 2022	Evidence bundle 1	Family timeline	'*Yusuf was given medication, and over the next few hours he was consistently observed by doctors and nurses. In this time, he also had a chest x-ray. The doctor explained the results of the x-ray to mum, outlining that he has a small infection on his chest.'*
18th November 2022 17:56	SCH evidence folder Radiology / radiology reports	radiology reports	First Xray report.
18th November 2022 18:16	Evidence bundle from YN's family	WhatsApp chat Fresh Ahmed's group	Fresh Ahmed's group – SA: They said chest Xray clear SA: So all the noise is from throat.
18th November 2022 18:30	SCH evidence folder Full EMS / nursing and charts / nursing documentation	Nursing notes	Nursing notes referencing the medics have seen the Xray results.

Date and Time	Source of Document/Evidence	Description of Evidence	Event/Activity
18th November 2022 19:38	SCH folder / reports / 2616 ICE results	2616 ICE results Pathology results	ICE results Pathology results. Reading from the bottom of the report upwards.
18th November 2022	Evidence bundle 1	Family timeline	'*Whilst in the A&E department, a doctor apologised to Yusuf's mum for double dosing Yusuf with a medication/steroid that is used for airways and wheeziness. The doctor explained that a possible effect of this could be high blood sugar, so they began monitoring Yusuf's blood sugars.'*
18th November 2022 19:38 – 22rd November 222	SCH folder / reports / 2616 ICE results	2616 ICE results Pathology results	ICE results Pathology results. Reading from the bottom of the report upwards.
18th November 2022	Evidence bundle 1	Family timeline	'*At approximately 10pm Yusuf was taken into the ward.'*
18th November 2022	Evidence bundle 1	Family timeline	'*Later on, issues developed with Yusuf's cannula. The bandage around the cannula repeatedly got wet, and the nurses assumed Yusuf was drooling on his hand. They had attempted to twist and turn the needle a little, but hadn't fully rectified the issue with the cannula. Yusuf's cannula continued leaking over the weekend until* ***Monday*** *when his bed was wet. (see Appendix 1).'*
18th November 2022	SCH Zip file 2616 Document request 01 History Sheets / ENT	ENT notes commenced on 18th November 2022. Speciality General medicine	empty ENT medical note records, however, they have printed Yusuf's sticker on the paper.

Date and Time	Source of Document/Evidence	Description of Evidence	Event/Activity
18th November 2022 22:00 – 21st November 2022 06:00	SCH Zip file 2616 Document request 01 fluid balance chart	Paediatric fluid balance chart	Paediatric fluid balance chart. Starts from 22:00, on 18th November 2022. However, most recorded data on the 19th November 2022.
18th November 2022 22:15	SCH evidence folder / history sheets / ED card A&E	Nursing notes stating accidental overdose of a medication	22:15 - Nurse states the accidental double dose of a medication, how they have escalated and how they are monitoring Yusuf's bloods in relation to the effects of the medication.
18th November 2022 ED Discharge time 22:27	SCH Zip file 2616 Document request 01 Correspondence / Discharge summary	Sheffield Children's NHS Foundation Trust Accident and Emergency Department	Accident and Emergency Department Discharge Summary Date 18.11.2022 14:47 Admission Date 18.11.2022 22:27 discharge and admitted at the time to a ward. Discharge Diagnosis: Laterality: Not applicable, description: Tonsillitis, Confirmed diagnosis Discharge follow up: Admitted
18th November 2022	SCH evidence folder nursing and charts / Nursing documentation / care plans	A list of care plans	Care plan references A list of care plans that are known, no other reference / evidence of care plans and their context
18th November 2022	SCH Zip file 2616 Document request 01 Care flow vital charts	SCH Care flow vital charts	PEWS - Vital charts from the 18th November 2022 – 19th November 2022

Date and Time	Source of Document/Evidence	Description of Evidence	Event/Activity
18th - 21st November 2022	SCH folder / reports / 2616 ICE results	2616 ICE results Cumulative 5	This gives a day-by-day report of the pathology results.
19th November 2022	Evidence bundle 1	Family timeline	*'Yusuf began eating small amounts and drinking small amounts, and was able to sit up a little. Prior to this Yusuf had been extremely drowsy and sleepy, with wake windows of about 15 minutes.'*
19th November 2022	SCH evidence folder / care flow charts	Clinical observations sheet	This highlights the clinical decline in Yusuf's physical health. Starting from the 18th November 2022 in to the 19th November 2022, showing clear signs of Yusuf's breathing difficulty adding higher O2 therapy.
19th November 2022 12:57	SCH folder / reports / 2616 ICE results	2616 ICE results Cumulative 5	Pathology reports.
19th November 202212:57	SCH folder / reports / 2616 ICE results	2616 ICE results Cumulative 5	This is a summary of the pathology reports processed from 18th –21st November 2022
19th November 2022 12:15	SCH evidence folder / clinical notes referred to in email	Medical notes for YN	Doctor's clinical assessment recorded, in handwritten form, hard to read. Give physical observations readings and PEWs 4.
19th November 2022	TRFT Evidence folder	ED Staffing rota	exported data from the TRFT ED staffing rota.

Date and Time	Source of Document/Evidence	Description of Evidence	Event/Activity
19th November 2022 22:30	SCH Zip file 2616 Document request 01 / Nurses documentation	Short stay nursing admission	Handwritten notes from three nurses on different dates and times.
19th November 2022	SCH Zip file 2616 Document request 01 Care flow vital charts	SCH Care flow vital charts	Vital charts from the 19th November 2022 – 20th November 2022.
20th November 2022	Evidence bundle 1	Family timeline	'*Since Yusuf was admitted he consistently showed oxygen level readings of low 80's, and remained on oxygen throughout.'*
20th November 2022 08:25	SCH evidence folder / Care flow vital charts	SCH Care flow vital charts	PEWS score 4 flow rate O2 6litre/min sats 96 hr 124 / resps 40 / no B/P no temp / resp distress mild
20th November 2022	Evidence bundle 1	Family timeline	'*At this point doctors and nurses informed Yusuf's mum that his oxygen shouldn't be this low, and they are unaware as to why it is this low. They said they assume it is this low because of his severe tonsillitis combined with his chest infection.'*
20th November 2022	SCH evidence folder / clinical notes referred to in email	Medical notes	Observations recorded, summary of doctor's assessment, Yusuf asleep throughout assessment.
20th November 2022	Evidence bundle 1	Family timeline	'*No x-ray was performed over the weekend.'*

Date and Time	Source of Document/Evidence	Description of Evidence	Event/Activity
20th November 2022	Evidence bundle 1	Family timeline	'*By Sunday afternoon, Yusuf's was again struggling to eat/drink.'*
20th November 2022 13:00	SCH evidence folder	Nursing notes	The nurses document at "*Yusuf being very unsettled coughing lots and got prominent stridor. 4l O2via mask, cannular tissued, Yusuf not eaten or drank much plan to re-cannulate."*
20th November 2022 17:00	SCH evidence folder	Nursing notes	"*Re-cannulated, IV fluids commenced. Continues to have small sips of water."*
20th November 2022 19:04	SCH evidence / care flow records	Clinical observations	PEWs score 4 4l/m O2 sats 100% moderate distress resps / H/R 86 / temp 36.1 / no B/P
20th November 2022	Evidence bundle 1	Family timeline	*'Sunday night Yusuf's breathing significantly worsened, and he began complaining of severe pain in his abdominal area'*
20th November 2022	Evidence bundle 1	Family timeline	'*During the night, Yusuf was seen to by a doctor at approximately 2/3am. The doctor listened to Yusuf's chest and said his chest is clear, and he did not need nebulisers.'*
20th November 2022	TRFT Evidence folder	ED Staffing rota	Exported data from the TRFT ED staffing rota.
20th November 2022	SCH Zip file 2616 Document request 01 / Nurses documentation	Nursing Accountability sheet	20th November 2022 – 23rd November 2022 date reference. Nursing responsibility sheet for that day on shift.

Date and Time	Source of Document/Evidence	Description of Evidence	Event/Activity
20th November	Statements, interviews, SCH records	Timeline	Addendum – workstream to identify the inconsistences between statements
20th November 2022 09:53	SCH folder / reports / 2616 ICE results	2616 ICE results Cumulative 5	ICE results Pathology results.
20th November 2022	SCH Zip file 2616 Document request 01 Care flow vital charts	SCH Care flow vital charts	Vital charts from the 20th November 2022 –21st November 2022.
21st November 2022	TRFT Evidence folder	ED Staffing rota	Exported data from the TRFT ED staffing rota.
21st November 2022	SCH folder Nursing rota	SCH nursing rota Medical week commencing 21.11.2022	Copy of the medical rota.
21st November 2022 07: 59	SCH evidence folder =/ care flow charts	Clinical observations	PEWS observation chart scores identifies a PEWS score of 4.
21st November 2022 09:18	SCH evidence folder =/ care flow charts	Clinical observations	PEWS observation chart scores identifies a PEWS score of 6.
21st November 2022 09:30	SCH evidence folder =/ care flow charts	Clinical observations	PEWS observation chart scores identifies a PEWS score of 7.
21st November 2022	Evidence bundle 1	Family timeline	'*At approximately 10am, another doctor examined Yusuf. She was not content with his breathing and asked whether a doctor had seen him in the*

Date and Time	Source of Document/Evidence	Description of Evidence	Event/Activity
			night like this. Mum told her that he has been examined in the night, and the doctor in the night said his chest was clear. The doctor then gave Yusuf a nebuliser and was very concerned about Yusuf's breathing, stating that he is trying too hard to breathe.'
21st November 2022	Evidence bundle 1	Family timeline	'*The doctor then called for immediate help from other doctors.'*
21st November 2022 10:49	SCH evidence folder =/ care flow charts	Clinical observations	PEWS observation chart scores identifies a PEWS score of 8.
21st November 2022	Evidence bundles 1	Family timeline	'*Yusuf's mum, dad, and* [Yusuf's uncle], *were informed that Yusuf's infection had spread and he had developed pneumonia. They explained that they now have three infections to deal with, so they will take over his breathing so that they can focus on treating the infections.'*
21st November 2022 11:30	SCH Zip file 2616 Document request 01 History Sheets / Critical Care	Grade ST3 Doctor ward SCH PCCU SBAR Referral Form	PCCU SBAR Referral Form. Referral form for admitting to the PCCU unit.
21st November 2022	Evidence bundle 1	Family timeline	'*A chest x-ray was performed.'*
21st November 2022 11:58	SCH evidence folder / radiology reports	Xray report	Next Xray after the 18th November 2022.

Date and Time	Source of Document/Evidence	Description of Evidence	Event/Activity
21st November 2022 12:00 –00:00	SCH evidence folder /ICU charts	Physical observations blood results	Intensive Care Unit physical observation readings.
21st November 2022 12:05	SCH evidence folder / history sheets / continuation sheet	PCCU medical notes	Medical notes on Yusuf.
21st November 2022 12:18	SCH evidence folder =/ care flow charts	Clinical observations	PEWS observation chart scores identifies a PEWS score of 13.
21st November 2022	Evidence bundle 1	Family timeline	'*The doctor's then used alternative medication, and shared that if this medication was not effective then they would need to take him to ICU.'*
21st November 2022	Evidence bundle 1	Family timeline	'Approximately 20 minutes later it was decided by the doctors that Yusuf should be taken to the ICU to be monitored closely.'
21st November 2022 – 23rd November	SCH folder Pharmacy Drug chart	Pharmacy PCCU Prescription chart Intravenous fluid infusions	This is Yusuf's PCCU Drug chart including intravenous fluid infusions chart.
21st November 2022	SCH Zip file 2616 Document request 01 / ICU notes	PCCU medical chart records	PCCU forms.
21st November 2022	SCH Zip file 2616 Document request 01 / Nurses documentation	PCCU medical chart records	PCCU admission form, completed by a nurse.

Date and Time	Source of Document/Evidence	Description of Evidence	Event/Activity
		Administration referral form	
21st November 2022 13:20	SCH Zip file 2616 Document request 01 History Sheets / Critical Care	Grade CF Doctor PCCU/HDU Medical History Document	PCCU/HDU Medical History Document.
21st November 2022 14:00	SCH Zip file 2616 Document request 01 investigations / Cumulative results	ICU Cumulative results sheet	ICU Cumulative results sheet. Blood/Clotting/Electrolytes Record.
21st November 2022	SCH Zip file 2616 Document request 01 Correspondence/ PALS involvement	Ward	SCH PALS correspondents with TRFT.
21st November 2022	Evidence bundle 1	Family timeline	*'Upon arrival at the ICU, Yusuf was given oxygen, and later in the night at approximately 8pm Yusuf was put onto the ventilator.'*
21st November 20:48	SCH folder Radiology / radiology reports	Radiology reports doc (10)	Chest X-ray report.
22nd November 2022	Evidence bundle 1	Family timeline	'*By this time Yusuf's condition had significantly deteriorated. A neck scan was performed in the morning, which showed "total blockage" (described as all white and cloudy by the doctors).'*

Date and Time	Source of Document/Evidence	Description of Evidence	Event/Activity
22nd November 2022	Evidence bundle 1	Family timeline	*An x-ray was performed in the afternoon. The doctor explaining the x-ray described that Yusuf's chest x-ray showed severe infection had developed in the chest, the right lung was filled with fluid, and most of the left. He also explained that one airway was blocked. This x-ray was a repeat of the x-ray taken on Monday (the family overheard the nurses discussing the low quality of the x-ray taken on Monday)'*
22nd November 2022	Evidence bundle 1	Family timeline	'*Yusuf's mum, dad and* [Yusuf's uncle], *had a meeting with the consultant. During the meeting, the family were informed that Yusuf is suffering from several complications. His oxygen is not travelling through his body due to his blood being too thick. Family were informed that the doctors have decided to over fluid Yusuf in an attempt to thin his blood to allow oxygen circulation. They explained that if this procedure is successful, Yusuf will need a kidney dialysis to clear the fluids. The doctors explained that Yusuf's condition is very critical, they had protected his heart with medication but are unaware of the extent of damage done to the brain or other organs due to no oxygen travelling through his body via his blood.'*
22nd November 2022	Evidence bundle 1	Family timeline	'*Tuesday night several procedures were carried out, and family were informed that Yusuf needs to be transferred to the main ventilator as his condition is critical, and there is a possibility that Yusuf may not make it.'*
22nd November 2022	TRFT Evidence folder	ED Staffing rota	Exported data from the TRFT ED staffing rota.
22nd November 2022	SCH folder / reports / 2616 ICE results	2616 ICE results	ICE results Pathology results.

Date and Time	Source of Document/Evidence	Description of Evidence	Event/Activity
22nd November 2022	SCH folder pharmacy / other documents	pharmacy / other documents Admission med	Yusuf's medication PCCU chart.
22nd November 2022 11:44	SCH folder Radiology / radiology reports	Radiology / radiology reports doc (11)	Chest X-ray report.
22nd November 2022	SCH Zip file 2616 Document request 01 / non barcoded	Comfort B score	Comfort chart for when a patient is extubated, includes pain scores.
22nd November 2022 13:10	SCH folder Radiology / radiology reports	Radiology reports doc (12)	Chest X-ray report.
22nd November 2022	SCH Zip file 2616 Document request 01 / ICU notes	PCCU medical chart records	PCCU in put an out-put chart one sheet on the next sheet is a note of time of admission to ICU time of death and time of discharge.
22nd November 2022 16:42	SCH folder Radiology / radiology reports	Radiology reports doc (13)	Chest X-ray report.
22nd November 2022	SCH Zip file 2616 Document request 01 / non barcoded	Comfort B score	Skin integrity chart.
23rd November 2022	TRFT Evidence folder	ED Staffing rota	Exported data from the TRFT ED staffing rota.

Date and Time	Source of Document/Evidence	Description of Evidence	Event/Activity
23rd November 2022	SCH Zip file 2616 Document request 01 / ICU notes	PCCU medical chart records	PCCU charts.
22nd November 2022	SCH Zip file 2616 Document request 01 / non barcoded	Ventilation checks	Ventilation checks.
22nd November 2022	SCH Zip file 2616 Document request 01 / non barcoded	Handwritten clinical notes.	Nitric oxide observations chart.
22nd November 2022	SCH Zip file 2616 Document request 01 / non barcoded	Central lines guidance	Central lines guidance.
22nd November 2022	SCH file Therapies / Dietetics	Dietetic Notes	Dietetic consultant notes.
23rd November 2022	Evidence bundle 1	Family timeline	'*The doctors attempted to change the ventilator Yusuf was on. Whilst switching ventilators, Yusuf lost his pulse.'*
23rd November 2022	Evidence bundle 1	Family timeline	'*Several resuscitation attempts were made. Yusuf passed away at approximately 11:15am.'*
23rd November 2022	SCH file Theatre documentation / other documentation	other documentation	Checklist for a procedure, no time or date stated.

Date and Time	Source of Document/Evidence	Description of Evidence	Event/Activity
23rd November 2022	SCH folder / reports / 2616 ICE results	2616 ICE results Cumulative 3,4	ICE results Pathology results.
22nd November 2022	SCH Zip file 2616 Document request 01 / Nurses documentation	Nursing care plan documentation	Updated care plan checklist.
23rd November 2022 01:16	SCH folder Radiology / radiology reports	Radiology reports doc (14)	ICE results Pathology results.
23rd November 2022 09:17	SCH folder Radiology / radiology reports	Radiology reports doc (15)	ICE results Pathology results.
23rd November 2022 Start time: 09:45 Stop time: 09:55	SCH Zip file 2616 Document request 01 Blood Product Transfusion		Blood/ Blood component Integrated Care Pathway – Clinical Indication for transfusion: Anaemia T Unit G095 622527 919A Product RBC temp 36.59 Resps – bagged BP – 59/38 (47) Pulse- 143 Post tx Arrest – CPR Being given Unit 2 G095 622 535 6147 Product – Platelets
23rd November 2022 09:44 / 10:33 - 11:03	SCH Zip file 2616 Document request 01 investigations / Investigations	ECG results	Multiple ECG results.
23rd November 2022	SCH Zip file 2616 Document request 01 Correspondence Other documentation	Sheffield Children's NHS Foundation Trust	Death summary for Yusuf Nazir: DOB12/08/2022: NHS No.: 717 682 4975 Date of admission to SCH PCCU Department: 21/11/2022

Date and Time	Source of Document/Evidence	Description of Evidence	Event/Activity
		Letter to YN GP surgery.	Date of death: 23/11/2022 Time of certification: 11:17am
23rd November 2022	SCH Zip file 2616 Document request 01	Consultant	Immediate Decision Making Proforma Following A Child Death – Actions to be completed 1-2 hours of death being declared.
23rd November 2022	SCH Zip file 2616 Document request 01 Correspondence / contact Sheet	Sheffield Children 's Hospital Contact sheet	Contact sheet – Type of Contact- Face to Face – Name of person spoken to – Maternal Uncle Brief Details of conversation – [Yusuf's uncle], asked to speak to myself and the nurse in charge. He told us that the family had concerns with Yusuf's care at Rotherham General Infirmary prior to his condition to Sheffield and the family had submitted a formal complaint to Rotherham. [Yusuf's uncle], asked us to inform the coroner of the families concerns and their complaint. Action taken- Consultant informed who passed the information to the coroner. Signed by staff nurse.
23rd November 2022 Time of Death 11:17	SCH Zip file 2616 Document request 01 Non Barcoded Form	8109481_1_1 handwritten notes of the PT resuscitation process Resuscitation 4	handwritten notes of the PT resuscitation process.

Date and Time	Source of Document/Evidence	Description of Evidence	Event/Activity
23rd November 222	SCH Zip file 2616 Document request 01 Correspondence/ documentation Post Death	Detailed summary of events from consultant	Detailed letter of events including a timeline.
(Not dated)	SCH Zip file 2616 Document request 01 Correspondance / documentation Post Death PowerPoint on the case of Yusuf	PowerPoint Presentation	PowerPoint on Yusuf's case in detail, looks to have been presented to other health professionals. Not given a date or context of such presentation.
23rd November 2022	SCH Zip file 2616 Document request 01 / non barcoded	Letter to GP	Letter to GP.
23rd November 2022	SCH Zip file 2616 Document request 01 / non barcoded	Consultants checklist for referral to coroner	Consultants' checklist for referral to Coroner.
23rd November 2022	SCH folder / reports / 2616 ICE results	2616 ICE results Cumulative 1,2	ICE results Pathology results

Date and Time	Source of Document/Evidence	Description of Evidence	Event/Activity
23rd - 29th November 2022	SCH folder / reports / 2616 ICE results	2616 ICE results	ICE results Pathology results
25th November 2022	SCH folder therapies / dietetics	Dietetics notes	Discharge from their care.
25th November 2022	SCH folder therapies / dietetics	Dietetics notes	Child Death Review Dietitian review - Dietetics notes.
26th November 2022	SCH Folder /Full EDMS record / Chid Assessment Unit Safeguarding / Child Death document	Mortality meeting minutes for unexpected death	To be used to record minutes of Child Death Review Meeting.
26th November 2022	SCH Folder /Full EDMS record / Chid Assessment Unit Safeguarding / Child Death document	Child death review information gathering form - pharmacy section	The Pharmacist's account of Yusuf's medication treatment.
26th November 2022	SCH Folder /Full EDMS record / Chid Assessment Unit Safeguarding / Child Death document	Child death review information gathering form - nursing section	Nursing account of Yusuf's care.
26th November 2022	SCH Folder /Full EDMS record / Chid Assessment Unit	Child death review	The Occupational Therapist's account of their care to Yusuf.

Date and Time	Source of Document/Evidence	Description of Evidence	Event/Activity
	Safeguarding / Child Death document	Physiotherapy / occupational therapy / other review	
29th November 2022 07:21:25	SCH Zip file 2616 Document request 01 Child death / Family Follow up	Speciality – Critical Care	SCH Bereavement Follow Up – Telephone call from the bereavement nurse to Yusuf's mother and father to offer ongoing support and explain role of Key Worker. (Written retrospectively, 28th November 2022).
2nd December 2022 11:10	SCH Zip file 2616 Document request 01 History Sheets / Critical Care	ICU Continuation Sheet	Handwritten document detailing Yusuf's care.
28th December 2022	SCH Zip file 2616 Document request 01 / Mycology test	Severn Pathology, infection sciences	UK HSA Mycology Reference Laboratory. Lab results for Yusuf.

CCTV viewing at Rotherham General Hospital conducted at 11.00 on 11.03.25

Present:

Peter Carter - Independent Investigation Chairman

Shaney-Ann Charles and Paul Jennings - Nurture Health and Care

Rotherham General Hospital, Deputy Director Corporate Affairs and Deputy Head of Security.

4 x CCTV camera imagery viewed between 23.20/15.11.2022 and 05.45/16.11.2022 covering

1. Paediatric Waiting Room.

2. Adjacent medical corridor with a view of the nursing station, access to examination cubicles.

3. Exit corridor.

4. Adult waiting area.

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23.20 – Yusuf's Mother and child, Yusuf Nazir, walk into the Paediatric waiting room and take a seat.

23.28 – ED Nurse escorts Mum and Yusuf into the adjacent medical corridor.

23.28.39 – ED Nurse, Mum and Yusuf entre a triage cubicle and out of sight.

23.32.27 – ED Nurse , Mum and Yusuf come out of the triage cubicle.

23.32.34 – Mum and Yusuf re-enter the Paediatric waiting area and take a seat.

23.57.52 – Yusuf appears to have a coughing fit.

23.58.05 – Witness J, sat opposite appears to look in the direction of Yusuf.

23.58.14 – Witness J collects a vomit bowl and hands it to Mum.

00.4.37 – Mum appears to be texting.

00.14.53 – Yusuf appears to be coughing; Mum holds the vomit bowl towards Yusuf.

00.18.46 – Yusuf appears to be coughing; Mum holds the vomit bowl towards Yusuf.

00.23.17 – Yusuf appears to be coughing; Mum holds the vomit bowl towards Yusuf.

00.23.32 – Witness J leaves the Paediatric waiting room and enters the medical corridor.

00.23.39 – Witness J walks up to the nursing station and appears to talk to a nurse.

00.24.03 – Witness J returns to the Paediatric waiting area.

00.24.17 – Witness J appears to talk to Mum.

00.24.27 – Mum and Yusuf move into the medical corridor.

00.24.44 – Mum, Yusuf and ED Nurse go into a triage cubicle.

00.26.50 – Mum and Yusuf come out of the cubicle.

00.27.08 – Mum speaks to the ED Nurse.

00.27.24 – Mum and Yusuf take seats in the Paediatric waiting area.

00.31.34 – Mum appears to be texting.

00.35.43 – Mum appears to make a call on mobile phone.

00.42.43 – Yusuf appears floppy, Mum picks him up and carries Yusuf into the medical corridor up to the nursing station.

00.42.55 – Mum at nursing station holding Yusuf who appears to be asleep in her arms.

00.45.05 – Mum takes a seat alongside the nursing station with Yusuf in her arms.

00.46.00 – ED Nurse speaks to Mum.

00.48.51 – ED Nurse speaking to Mum leaves Mum to attend another patient. Mum remains on same seat next to the nursing station.

00.50.54 – Mum leaves the nursing station with Yusuf in her arms and returns to the Paediatric waiting area and sits down with Yusuf on her lap.

01.05.06 – Yusuf's Uncle, enters Paediatric waiting area and appears to speak to Mum.

01.05.39 – Uncle enters the medical corridor and appears to talk to nurses at the nurse station.

01.08.35 – ED Nurse Sister appears to hand Uncle a piece of paper.

01.11.49 – Uncle returns to the Paediatric waiting area and joins Mum and Yusuf.

01.23.09 – Uncle, Mum and Yusuf go into the medical corridor.

01.23.13 – Uncle, Mum and Yusuf met by Health Care Assistant (HCA), go towards a medical cubicle at the far end of the corridor and out of sight.

01.23.48 – ED Nurse appears to go into the same cubicle.

01.33.23- HCA returns into the medical corridor.

01.33.30 – HCA and ED Nurse appear to be speaking to each other in medical corridor.

APPENDIX 2 CCTV
Chronology

01.36.06 – Uncle appears from the direction the cubicle and appears to talk to ED Nurse Sister at the nurse station.

01.36.35 – Uncle is handed a blanket by ED Nurse.

01.36.41 – Uncle returns in the direction of the medical cubicle and out of sight.

01.38.16 – ED Nurse Sister takes pillows in the direction of the medical cubicle.

01.39.48 – Uncle enters the medical corridor from the direction of the cubicle.

01.40.04 – Uncle into waiting area and leaves.

03.29.39 – HCA walks out of sight towards the medical cubicle for Yusuf.

03.33.23 – HCA reappears from the direction of the medical cubicle.

03.33.51 – HCA returns in the direction of the medical cubicle.

03.34.05 – HCA reappears from the direction of the medical cubicle and appears to speak to ED Nurse Sister at the nursing station.

03.37.47 – HCA appears to be talking to ED Nurse at the nurse station.

04.28.44 – HCA walks out of sight in the direction of the medical cubicle for Yusuf.

04.38.23 – HCA reappears from the medical cubicle.

04.55.33 – HCA out of sight towards the medical cubicle.

04.55.58 – HCA reappears from the medical cubicle direction.

05.06.53 – HCA out of sight in the direction of the medical cubicle.

05.11.20 – HCA reappears from the direction of the medical cubicle.

05.17.35 – Doctor appears to go into the medical cubicle for Yusuf.

05.20.19 – Doctor reappears from the direction of the medical cubicle.

05.20.27 – Doctor appears to back into the medical cubicle.

05.21.09 – Doctor reappears from the medical cubicle and up to the nursing station desk.

05.21.55 – Doctor returns in the direction of the medical cubicle and out of sight.

05.25.46 – Doctor reappears from the direction of the medical cubicle and returns to the nursing station.

05.32.16 – Doctor walks out of sight in the direction of the medical cubicle he is holding an A5 sized piece of paper in his hand.

05.32.50 – Doctor reappears from the direction of the medical cubicle. No sign of the A5 sized piece of paper and sits down at the nursing station.

05.35.38 – Mum and Yusuf appear from the direction of the medical cubicle. They are walking hand in hand. Both wearing their coats. ED Nurse walks with them towards the Paediatric waiting area.

05.35.58 – Mum and Yusuf seen alone walking hand in hand along corridor towards the adult reception area. Yusuf has his hood up.

05.36.32 – Mum and Yusuf sit in the main adult waiting area.

05.44.02 – Mum and Yusuf leave the hospital, appear to have left by car.

Notes Recorded by Paul Jennings.wat

Appendix 3 Evidence Log

No.	Source	Document Name	Further description	Date Received	Reviewed by Ambulance Expert	Reviewed by Dr Expert	Reviewed by Thematic and Risk Analysis Lead	Reviewed by Nurse Expert	Reviewed and included in detail in reports
1	SCH	8109498_1_0_Blood_Component_Integrated_Care_Pathway	Blood/Blood Componenet Intergrated Pathway document	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
2	SCH	EWSReport C693164	Care Flow Vital Chart dated 20/11/2022 to 21/11/2022	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
3	SCH	8109532_1_0_History_Sheet_Medicine	History sheets Clinical notes dated from 18/11/22 time :16:40 to 21/11/22 12:00	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	read only
4	SCH	8109491_1_0_Contact_sheet_Non_safeguarding	Note of conversation/ Contact sheet dated 23/11/22 recorded between Yusuf's Uncle and Staff Nurse	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
5	SCH	8086493_1_0_E.D._Discharge_Summary	ED discharge summary admission date: 18/11/2022 14:47 discharge date: 18/11/2022 22:27	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Considered and included as part of judgement in relation to cause of death
6	SCH	8105711_1_0_Death_Summary_Critical_care		02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Aware of PALS involvement whilst at SCH
7	SCH	13 - PALS involvement	dated 21/11/22	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
8	SCH	14 - Yusuf Nazir C693164	Overview of care	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Included as part of the approach of care
9	SCH	8121726_1_0_Bereavement_follow_up	telephone note of call made to Yusuf's mum signed 29/11/2022	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Considered and included as part of judgement in relation to cause of death
10	SCH	8109506_1_0_Child_death_Immediate_Decision_Making_Proforma		02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	read only
11	SCH	Yusuf Nazir Mortality- PCCU Morbidity Meetings: Code of Conduct		02/01/2025	No as not relevant to ambulance	Yes	Yes	No as felt it was outside my nursing expertise	Evidence of training considered
12	SCH	IV WORKBOOK 2024 2025		24/02/2025	No as not relevant to ambulance	Yes	Yes	Yes	Evidence of training considered
13	SCH	IVSD day 1	IV STUDY DAY DOCUMENT	24/02/2025	No as not relevant to ambulance	Yes	Yes	Yes	Evidence of training considered
14	SCH	IVSD day 2	IV STUDY DAY DOCUMENT	24/02/2025	No as not relevant to ambulance	Yes	Yes	Yes	Evidence of training considered
15	SCH	PRECEPTEES DRUG PREPARATION AND ADMINISTRATION ASSESSMENT		24/02/2025	No as not relevant to ambulance	Yes	Yes	Yes	Evidence of training considered
16	SCH	Staffing information 1		24/02/2025	No as not relevant to ambulance	Yes	Yes	Yes	Part of workforce review
17	SCH	Staffing Information 2		24/02/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
18	SCH	8109473_1_0_Paediatric_Fluid_Balance_Chart__v2018		02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
19	SCH	8076806_1_0_Ambulance_Sheet_Accident_and_Emergency		02/01/2025	Yes	Yes	Yes	Yes	Contributed to understanding
20	SCH	8078334_1_0_ED_Card_Accident_and_Emergency		02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Contributed to understanding
21	SCH	8109511_1_0_PCCU_SBAR_Referral_form	Situation, Background, Assessment, Recommendation referral form dated 21/11/2022	02/01/2025	No as not relevant to ambulance	Yes	Yes	No as felt it was outside my nursing expertise	Critical care was reviewed within the competency of the medical team
22	SCH	8109523_1_0_ICU_Continuation_Sheet	PICU/HDU Medical history document dated 21/11/22 time 13:30	02/01/2025	No as not relevant to ambulance	Yes	Yes	No as felt it was outside my nursing expertise	Critical care was reviewed within the competency of the medical team
23	SCH	8144924_1_0_ICU_Continuation_Sheet	As above continued	02/01/2025	No as not relevant to ambulance	Yes	Yes	No as felt it was outside my nursing expertise	Reviewed and included in detail in reports
24	SCH	8109522_1_0_History_Sheet_ENT	blank doc with sticker stating ' patient saw more than one speciality during this episode...' dated 18/11/22	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
26	SCH	10 - ED Wait Times		02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
27	SCH	Bed occupancy stats		02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Evidence of training considered
28	SCH	vital sign report 2016		02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Evidence of training considered
29	SCH	Vital_Signs_Open_Data_2015_16		02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Critical care was reviewed within the competency of the medical team
30	SCH	21.11.22 SIDE 1	Paediatric Criticial Care Unit Notes	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Critical care was reviewed within the competency of the medical team
31	SCH	21.11.22 SIDE 2	Paediatric Criticial Care Unit Notes	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Critical care was reviewed within the competency of the medical team
32	SCH	22.11.22 SIDE 1	Paediatric Criticial Care Unit Notes	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Critical care was reviewed within the competency of the medical team
33	SCH	22.11.22 SIDE 2	Paediatric Criticial Care Unit Notes	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Critical care was reviewed within the competency of the medical team
34	SCH	23.11.22 SIDE 1	Paediatric Criticial Care Unit Notes	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Critical care was reviewed within the competency of the medical team
35	SCH	23.11.22 SIDE 2	Paediatric Criticial Care Unit Notes	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Critical care was reviewed within the competency of the medical team
36	SCH	8109501_1_0_ICU_Cumulative_Result_Sheet		02/01/2025	No as not relevant to ambulance	Yes	Yes	No as felt it was outside my nursing expertise	Critical care was reviewed within the competency of the medical team
37	SCH	8109468_1_0_ECG		02/01/2025	No as not relevant to ambulance	Yes	Yes	No as felt it was outside my nursing expertise	Evidence of training considered
38	SCH	2022_Medicines_Management_for_Intravenous_therapy		02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Evidence of training considered

39	SCH	IV Training record		02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
40	SCH	Microbiology		02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
41	SCH	Mycology tests_22Nov22		02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
42	SCH	8109481_1_1_Non_Barcoded_Form	Clinican ICU evidence of Resus for 23/11/2022	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
43	SCH	8109483_1_0_Non_Barcoded_Form	Nitric Oxide Observations Chart	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
44	SCH	8109484_1_0_Non_Barcoded_Form	Central line chart dated 22/11/22	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
45	SCH	8109487_1_0_Non_Barcoded_Form	Dietetic note dated 22/11/22, signed 22/11/22 11:55:20	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
46	SCH	8109488_1_0_Non_Barcoded_Form	Comfort Behaviour Score Assessment sheet dated 22/11/2022	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
47	SCH	8109489_1_0_Non_Barcoded_Form	Skin Intergrity Tool dated 22/11/2022 time: 02:00 to 22/11/2022 time: 23:30	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
48	SCH	8109490_1_0_Non_Barcoded_Form	V500/ Oscillator Ventilation Checks dated 22/11/2022 to 23/11/2022	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
49	SCH	8109499_1_0_Non_Barcoded_Form	Form to Coroner from SCH dated 23/11/2022 emailed	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
50	SCH	8109502_1_0_Non_Barcoded_Form	Checklist for Referral to the Coroner Yusuf's sticker included but document is blank.	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Evidence of training considered
51	SCH	2022_Medicines_Management_for_Intravenous_therapy		29/01/2025	No as not relevant to ambulance	nursing expert	Yes	Yes	Evidence of training considered
52	SCH	2096v1 Peripheral VeNous Catheter.amends docx		05/02/2025	No as not relevant to ambulance	nursing expert	Yes	Yes	Evidence of training considered
53	SCH	926-PeripheralCannulaCare_doc		05/02/2025	No as not relevant to ambulance	nursing expert	Yes	Yes	Evidence of training considered
54	SCH	Explanation	Explanation provided from SCH hopsital clinician regarding blood gas results from 18/11/2022 to 21/11/2022	05/02/2025	No as not relevant to ambulance	nursing expert	Yes	Yes	Evidence of training considered
55	SCH	IV Training		02/01/2025	No as not relevant to ambulance	nursing expert	Yes	Yes	Reviewed and included in detail in reports
56	SCH	8109476_1_0_Nursing_Continuation_Sheet	Nursing documentation dated from 18/11/2022 time 17:20 to 2311/22 15:35	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
57	SCH	8109478_1_0_Nursing_Accountability_Sheet	Nursing documentation dated from 18/11/2022 time 17:20 to 2311/22 15:35	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
58	SCH	8109479_1_0_Nursing_Care_Plan_Documentation	recorded names of nurses invovled in Yusufs care from 20/11/22 to 23/11/22	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
59	SCH	8109493_1_0_Nursing_Admission_Booklet	Nursing Admission sheet dated from 18/11/2022 time 23:00 to 20/11/22 time: 06:30	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
60	SCH	8109494_1_0_Nursing_Admission_Booklet	Admission dated 21/11/22 time 12:30 to PICU	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Part of workforce review
61	SCH	Medical week commencing 14.11.22	medical rota	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Part of workforce review
62	SCH	Medical week commencing 21.11.22	medical rota	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Part of workforce review
63	SCH	Nursing 18-11 to 23-11	Nursing rota	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
64	SCH	8109533_1_0_Drug_administration_chart_-_short	For 21/11/2022	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Critical care was reviewed within the competency of the medical team
65	SCH	8109535_1_0_PCCUprescription_chart	for 22/11/2022	02/01/2025	No as not relevant to ambulance	Yes	Yes	No as felt it was outside my nursing expertise	Reviewed and included in detail in reports
66	SCH	8109509_1_0_Admission_Meds_Reconciliation		02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Evidence of training considered
67	SCH	1532v4 PCCU Dexamethasone Administration Guide	Guideline	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	read only
68	SCH	1974v1 09-20 TONSILLECTOMY GUIDELINE 17.09.20	Guideline	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Evidence of training considered
69	SCH	2096v1 Peripheral VeNous Catheter.amends docx	Guideline	02/01/2025	No as not relevant to ambulance	nursing expert	Yes	Yes	Evidence of training considered
70	SCH	963 05-18 Hypoglycaemia	Guideline	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Evidence of training considered
71	SCH	984v7.1 Measuring Observations	Guideline	02/01/2025	No as not relevant to ambulance	nursing expert	Yes	Yes	Evidence of training considered
72	SCH	CP85 Medicines Management Policy v9	Guideline	02/01/2025	No as not relevant to ambulance	nursing expert	Yes	Yes	read only
73	SCH	ED_Handbook_Final_copy_2022-2023 - see 1.19, 1.21 & 1.22	Guideline	02/01/2025	No as not relevant to ambulance	nursing expert	Yes	Yes	read only
74	SCH	Register snapshop	Entry dated 23/11/2022 recording time of death and corresponding information	02/01/2025	No as not relevant to ambulance	nursing expert	Yes	Yes	Reviewed and included in detail in reports
75	SCH	document (10)	Department of Radiology Clinical Report. Date of report vaildation 22/11/22 time: 10:19	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
76	SCH	document (11)	Department of Radiology Clinical Report. Date of report vaildation 22/11/22 time: 12:39	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
77	SCH	document (12)	Department of Radiology Clinical Report. Date of report vaildation 22/11/22 time: 14:16	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
78	SCH	document (13)	Department of Radiology Clinical Report. Date of report vaildation 22/11/22 time: 11:52	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
79	SCH	document (14)	Department of Radiology Clinical Report. Date of report vaildation 23/11/22 time: 12:58	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
80	SCH	document (15)	Department of Radiology Clinical Report. Date of report vaildation 23/11/22 time: 10:08	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
81	SCH	document (8)	Department of Radiology Clinical Report. Date of report vaildation 19/11/22 time: 12:57	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
82	SCH	document (9)	Department of Radiology Clinical Report. Date of report vaildation 21/11/22 time: 16:15	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
83	SCH	18Nov-22Nov	Copy of report from ICE (Intergrated Clinical Environment) Pathology System. from 18/11/22 time 19:38 to 22/11/2022 time 12:39	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Critical care was reviewed within the competency of the medical team
84	SCH	22Nov-23Nov	Copy of report from ICE (Intergrated Clinical Environment) Pathology System. from 22/11/22 time: 13:07 to 23/11/22 time 10:52	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports

85	SCH	23Nov-29Dec	Copy of report from ICE (Intergrated Clinical Environment) Pathology System. from 23/11/2022 time 11:52 to 29/12/22 time 12:08	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
86	SCH	Cumulative1	Copy of report from ICE (Intergrated Clinical Environment) Pathology System from 23/11/22 time 05:07 to 23/11/22 time 10:52	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
87	SCH	Cumulative2	Copy of report from ICE (Intergrated Clinical Environment) Pathology System from 23/11/22 time 04:54 to 23/11/22 time 12:26	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
88	SCH	Cumulative3	Copy of report from ICE (Intergrated Clinical Environment) Pathology System from 22/11/22 time 13:07 to 22:37	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
89	SCH	Cumulative4	Copy of report from ICE (Intergrated Clinical Environment) Pathology System from 22/11/22 time 02:17 to 16:53	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
90	SCH	Cumulative5	Copy of report from ICE (Intergrated Clinical Environment) Pathology System from 18/11/22 time 19:38to 21/11/22 time 14:44	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
99	SCH	8109510_1_0_Emergency_RSI_Checklist	Emergency Rapid Sequence Induction Checklist	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Critical care was reviewed but was considered within the competency of the medical team
100	SCH	8089452_1_0_Dietetics_note_Critical_care		02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Critical care was reviewed but was considered within the competency of the medical team
101	SCH	8110015_1_0_Dietetics_note_Critical_care		02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Critical care was reviewed but was considered within the competency of the medical team
102	SCH	8252280_1_0_Dietetics_Reports___Advice_(professional)_General_Medicine	Guideline	02/01/2025	No as not relevant to ambulance	Yes	Yes	Yes	Evidence of training considered
103	SCH	2096v1 Peripheral VeNous Catheter.amends docx	Guideline	05/02/2025	No as not relevant to ambulance	Yes	Yes	Yes	Evidence of training considered
104	SCH	926-PeripheralCannulaCare_doc	Guideline	05/02/2025	No as not relevant to ambulance	Yes	Yes	Yes	Evidence of training considered
105	YRS	Yusuf Nazir 7176824975 01 Oct 2021 2760201450 (2 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care not my speciaity	read only
106	YRS	Yusuf Nazir 7176824975 02 Sep 2021 2956452433 (2 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care not my speciaity	read only
107	YRS	Yusuf Nazir 7176824975 03 Nov 2021 2862554384 (3 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care not my speciaity	read only
108	YRS	Yusuf Nazir 7176824975 03 Nov 2021 2805931993	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care not my speciaity	read only
109	YRS	Yusuf Nazir 7176824975 03 Nov 2021 2810713298	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care not my speciaity	Reviewed and included in detail in reports
110	YRS	Yusuf Nazir 7176824975 03 Oct 2022 3266886128 (3 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care not my speciaity	Reviewed and included in detail in reports
111	YRS	Yusuf Nazir 7176824975 03 Oct 2022 3251928306	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care not my speciaity	Reviewed and included in detail in reports
112	YRS	Yusuf Nazir 7176824975 03 Oct 2022 3251890826 (1 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
113	YRS	Yusuf Nazir 7176824975 03 Sep 2021 2885123379 (3 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
114	YRS	Yusuf Nazir 7176824975 03 Sep 2021 2724198675 (2 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
115	YRS	Yusuf Nazir 7176824975 04 Apr 2022 3011834004	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
116	YRS	Yusuf Nazir 7176824975 04 May 2022 3047565562	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
117	YRS	Yusuf Nazir 7176824975 04 May 2022 3050537608	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
118	YRS	Yusuf Nazir 7176824975 06 May 2022 3076551193 (3 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
119	YRS	Yusuf Nazir 7176824975 07 Feb 2022 2960539739 (2 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
120	YRS	Yusuf Nazir 7176824975 07 Feb 2022 2951537376	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
121	YRS	Yusuf Nazir 7176824975 07 Jun 2022 3089866104	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
122	YRS	Yusuf Nazir 7176824975 07 Oct 2021 2767766866	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
123	YRS	Yusuf Nazir 7176824975 07 Sep 2021 2725405647- PARENTAL QUESTIONNAIRE	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
124	YRS	Yusuf Nazir 7176824975 07 Sep 2021 2725419657	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
125	YRS	Yusuf Nazir 7176824975 08 Sep 2022 3209445220	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
126	YRS	Yusuf Nazir 7176824975 09 Dec 2020 2406285743 (1 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
127	YRS	Yusuf Nazir 7176824975 09 Dec 2020 2406355648 (2 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
128	YRS	Yusuf Nazir 7176824975 09 Dec 2020 2404927862 (2 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
129	YRS	Yusuf Nazir 7176824975 09 Dec 2020 2404927863 (1 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	Reviewed and included in detail in reports
130	YRS	Yusuf Nazir 7176824975 09 Sep 2022 3245044692 (1 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
131	YRS	Yusuf Nazir 7176824975 10 Aug 2021 2805253997 (4 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
132	YRS	Yusuf Nazir 7176824975 10 May 2021 580680108 (2 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
133	YRS	Yusuf Nazir 7176824975 10 May 2021 2579122222	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
134	YRS	Yusuf Nazir 7176824975 11 Aug 2021 2695025194 (2 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
135	YRS	Yusuf Nazir 7176824975 11 Feb 2021 2460578170	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
136	YRS	Yusuf Nazir 7176824975 11 Jan 2021 2417814807	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only

137	YRS	Yusuf Nazir 7176824975 11 Jul 2019 1853957315- NHS 111 Report - For Information	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
138	YRS	Yusuf Nazir 7176824975 11 Jul 2019 1863489882 (2 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
139	YRS	Yusuf Nazir 7176824975 11 Jul 2019 1854057383 (3 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
140	YRS	Yusuf Nazir 7176824975 11 May 2022 3196681610 (1 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
141	YRS	Yusuf Nazir 7176824975 11 Oct 2021 2806340414 (2 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
142	YRS	Yusuf Nazir 7176824975 12 Apr 2021 2532417036	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
143	YRS	Yusuf Nazir 7176824975 12 Aug 2017 1355560446 (2 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
144	YRS	Yusuf Nazir 7176824975 12 Aug 2017 1395635239 (2 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
145	YRS	Yusuf Nazir 7176824975 12 Jan 2022 2907531899	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
146	YRS	Yusuf Nazir 7176824975 13 Sep 2018 1607949610 (2 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
147	YRS	Yusuf Nazir 7176824975 13 Sep 2018 1593031131 (3 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
148	YRS	Yusuf Nazir 7176824975 14 Feb 2020 2099458404 (2 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
149	YRS	Yusuf Nazir 7176824975 14 Sep 2021 2874841420 (2 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
150	YRS	Yusuf Nazir 7176824975 15 Aug 2017 1367553975 (3 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
151	YRS	Yusuf Nazir 7176824975 15 Nov 2022 3313171621	NHS 111 Report - For Information recrods Patients Reported Condition and Case Summary	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	Reviewed and included in detail in reports
152	YRS	Yusuf Nazir 7176824975 15 Oct 2018 1625213839 (3 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
153	YRS	Yusuf Nazir 7176824975 15 Oct 2018 1631418549 (2 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
154	YRS	Yusuf Nazir 7176824975 18 Jan 2019 1606887626	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
155	YRS	Yusuf Nazir 7176824975 19 Jan 2021 2450886025 (2 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
156	YRS	Yusuf Nazir 7176824975 19 Jan 2021 450764353 (2 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
157	YRS	Yusuf Nazir 7176824975 19 Nov 2019 2004446006	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
158	YRS	Yusuf Nazir 7176824975 20 Apr 2018 1463269654	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
159	YRS	Yusuf Nazir 7176824975 21 Aug 2017 1361418338 (2 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
160	YRS	Yusuf Nazir 7176824975 23 Dec 2019 2042057006	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
161	YRS	Yusuf Nazir 7176824975 23 May 2022 3075463287	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
162	YRS	Yusuf Nazir 7176824975 23 Nov 2022 3323805305	Child Death Notification	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	Read but not required to be part of evidence as outside TOR
163	YRS	Yusuf Nazir 7176824975 24 Aug 2017 1364748702	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
164	YRS	Yusuf Nazir 7176824975 25 Oct 2019 1976264353	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
165	YRS	Yusuf Nazir 7176824975 26 Aug 2021 2887869436 (2 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
166	YRS	Yusuf Nazir 7176824975 26 Dec 2019 2044340095	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
167	YRS	Yusuf Nazir 7176824975 26 Dec 2019 2044837012 (2 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
168	YRS	Yusuf Nazir 7176824975 26 Dec 2019 2048302848 (4 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
169	YRS	Yusuf Nazir 7176824975 26 Sep 2018 1615258361	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
170	YRS	Yusuf Nazir 7176824975 26 Sep 2018 1620210287 (2 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
171	YRS	Yusuf Nazir 7176824975 27 Sep 20181613845800	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
172	YRS	Yusuf Nazir 7176824975 27 Sep 2018 1615546212 (3 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
173	YRS	Yusuf Nazir 7176824975 28 Sep 2018 1618465005 (3 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
174	YRS	Yusuf Nazir 7176824975 28 Sep 2018 1604174567 (3 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
175	YRS	Yusuf Nazir 7176824975 30 Apr 2020 2163477338	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
176	YRS	Yusuf Nazir 7176824975 31 Aug 2017 1373973534 (3 pages)	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
177	YRS	Yusuf Nazir full medical records		12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	read only
178	YRS	Yusuf Nazir consultations	Historical GP records	12/02/2025	No as not relevant to ambulance	Yes	Yes	No as primary care is outside my area of speciality	Reviewed and included in detail in reports
179	TRFT	1. Scanned Medical Records	15 pages	16/01/2025	No as not relevant to ambulance	Yes	Yes	No as was not involved in reviewing care	Reviewed and included in detail in reports
180	TRFT	Additional Antibiotice Guideline Nov 2022		13/02/2025	No as not relevant to ambulance	Yes	Yes	No as was not involved in reviewing care	Evidence of training
181	TRFT	Admissions from ED	from period of April 2019 to October 2024	18/02/2025	No as not relevant to ambulance	Yes	Yes	No as was not involved in reviewing care	Workforce review
182	TRFT	Antibiotic Guideline in Use Nov 2022		13/02/2025	No as not relevant to ambulance	Yes	Yes	No as was not involved in reviewing care	Evidence of training
184	TRFT	Clinician Rosta		29/01/2025	No as not relevant to ambulance	Yes	Yes	No as was not involved in reviewing care	Workforce review

185	TRFT	Copy of ED - RN cover		29/01/2025	No as not relevant to ambulance	Yes	Yes	No as was not involved in reviewing care	Workforce review
186	TRFT	Copy of Emergency Department - ANP	Names of clinicans, duty dates and period of shifts during November 2022	29/01/2025	No as not relevant to ambulance	Yes	Yes	No as was not involved in reviewing care	Workforce review
187	TRFT	Copy of Emergency Department - ENP	Names of clinicans, duty dates and period of shifts during November 2023	29/01/2025	No as not relevant to ambulance	Yes	Yes	No as was not involved in reviewing care	Workforce review
188	TRFT	Copy of Primary Care	Names of clinicans, duty dates and period of shifts during November 2024	29/01/2025	No as not relevant to ambulance	Yes	Yes	No as was not involved in reviewing care	Workforce review
189	TRFT	Copy of PUECC - Allocation Assigned Duties	Names of clinicans, duty dates and period of shifts during November 2025	29/01/2025	No as not relevant to ambulance	Yes	Yes	No as was not involved in reviewing care	Workforce review
190	TRFT	Exported From Evidence of ED Staff Rota Data 18.11.2022		03/02/2025	No as not relevant to ambulance	Yes	Yes	No as was not involved in reviewing care	Workforce review
191	TRFT	Exported From Evidence of ED Staff Rota Data 19.11.2022		03/02/2025	No as not relevant to ambulance	Yes	Yes	No as was not involved in reviewing care	Workforce review
192	TRFT	Exported From Evidence of ED Staff Rota Data 20.11.2022		03/02/2025	No as not relevant to ambulance	Yes	Yes	No as was not involved in reviewing care	Workforce review
193	TRFT	Exported From Evidence of ED Staff Rota Data 21.11.2022		03/02/2025	No as not relevant to ambulance	Yes	Yes	No as was not involved in reviewing care	Workforce review
194	TRFT	Exported From Evidence of ED Staff Rota Data 22.11.2022		03/02/2025	No as not relevant to ambulance	Yes	Yes	No as was not involved in reviewing care	Workforce review
195	TRFT	Exported From Evidence of ED Staff Rota Data 23.11.2022		03/02/2025	No as not relevant to ambulance	Yes	Yes	No as was not involved in reviewing care	Workforce review
196	TRFT	UECC Numbers	Data covering period April 2019 to December 2024 for: Average Time to Initial Assessment (mins), TOTAL Number of attendances in Month, AVERAGE Number of attendance per day, TOTAL Number of Admissions from ED, AVERAGE Number of Admissions from ED, TOTAL Number of Did Not Waits and AVERAGE Number of Did Not Waits	13/02/2025	No as not relevant to ambulance	Yes	Yes	No as was not involved in reviewing care	Reviewed and included in detail in reports
197	YAS	Actions and Learning	This document outlines the learning identified within the Previous independent investigation and steps taken by YAS to address the points noted. It is provided as an 'Action Plan' document to assist the new investigation team from 'Nurture Healthcare'.	13/01/2025	Yes	Yes	Yes	No as not my expertise	Outside ToR although read for background
198	YAS	EPR - 13311206	Paramedics assessment	13/01/2025	Yes	Yes	Yes	No as not my expertise	Reviewed and included in detail in reports
199	YAS	JRCALC-15NOV2022_G0290_PaedsFebrile	Paramedics guidence on Febrile Illness in Children	13/01/2025	Yes	Yes	Yes	No as not my expertise	Evidence of training
200	NHS ENGLAND	Recommendations from idependant investigation Progress Dec 2024		Jan-25	No as not considered any other information	Yes	Yes	No as not my expertise	Outside ToR although read for background
	Family solicitor	Exhibit YN/1	Bundle of Documents for Investigators (created by family solicitor) 144 pages	26/09/2024	Yes	Yes	Yes	Yes	Reviewed and detail of evidence is detailed in rows
	Family solicitor	Exhibit YN/2	Updated Schedule of Whatsapp messages 57 pages	27/09/2024	Yes	Yes	Yes	Yes	Reviewed and included in detail in reports. Explanation for why full Whatsapp messages were not included is available in the FAC but all experts read in detail
201	Family solicitor	Exhibit YN3 PRESSURE STUDY clinical trial letter	Dated 17/07/2024	14/11/2024	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
202	Family solicitor	Exhibit YN4	Witness Contact Details	Received Nov 2024	N/A	N/A	N/A	N/A	N/A
203	Family solicitor	Exhibit YN5	YAS Complaint Outcome Letter	14/11/2024	Yes	Yes	Yes	Yes	Reviewed but lay outside ToR
204	Family solicitor	Exhibit YN6 Letter	Letter dated 22/12/23	14/11/2024	Yes	Yes	Yes	Yes	Reviewed and included in detail in reports
205	Family solicitor	Exhibit YN7 PRESSURE Clinical test notes	Dated 2/12/22	14/11/2024	No as not considered any other information	Yes	Yes	Yes	Not part of report but Pressure study details read by medical experts
206	NHS ENGLAND	Final Report (Confidential) October 2023 NI3	Previous Report	03/12/2025	No as not considered any other information	Yes	Yes	did not read niche	Not part of report - some have not read
207	NHS ENGLAND	Final Report (Abridged) October 2023 NI2	Previous Report	03/12/2025	No as not considered any other information	Yes	Yes	did not read niche	Not part of report - some have not read
208	NHS ENGLAND	Letter dated 17 May 2024 NSHE1		08/08/2024	No as not relevant to ambulance	Yes	Yes	No as not my expertise	Reviewed and included in detail in reports
209	NHS ENGLAND	ToR NI1	Terms of Reference	08/08/2024	Yes	Yes	Yes	Yes	read only but formed the framework for the investigation
210	TRFT	CCTV Footage of UEC waiting room and Nurses station	"4 x CCTV camera imagery viewed between 23.20/15.11.2022 and 05.45/16.11.2022 covering 1.Paediatric Waiting Room. 2.Adjacent medical corridor with a view of the nursing station, access to examination cubicles. 3.Exit corridor. 4.Adult waiting area. "	viewed on 11/03/2025	No as not relevant to ambulance	No	No	No as was not involved in reviewing care	Reviewed by two teams - the medical experts felt that the lack of focussed image and inability to be able to see Yusuf closely, the experts were not able to make any further comments but reviewed the chronology and the video provided prior to attending
212	YAS	111 HA Call part 2 15_11_2022 at 22_46_36 hrs duration 03_11 secs.wma	Audio recording	31/03/2025	Yes	Yes	Yes	No as not my expertise	Reviewed and included in detail in reports
213	YAS	111 HA Call part 2 15_11_2022 at 22_46_36 hrs duration 03_11 secs.wma	Audio recording	31/03/2025	Yes	Yes	Yes	No as not my expertise	Reviewed and included in detail in reports
214	YAS	111 HA Call part 3 15_11_2022 22_57_57 hrs check.wma	Audio recording	31/03/2025	Yes	Yes	Yes	No as not my expertise	Reviewed and included in detail in reports
215	YAS	111 HA Call part 3 15_11_2022 22_57_57 hrs check	Audio recording	31/03/2025	Yes	Yes	Yes	No as not my expertise	Reviewed and included in detail in reports
216	YAS	111 HA Call part 4 15_11_2022 23_00_56 hrs	Audio recording	31/03/2025	Yes	Yes	Yes	No as not my expertise	Reviewed and included in detail in reports
217	YAS	CTL Audit Tool Clinician (1)	Audit of 111 call conducted by YAS	31/03/2025	Yes	Yes	Yes	No as not my expertise	read only
218	YAS	NHS 111 Audit (Health Advisor)		31/03/2025	Yes	Yes	Yes	No as not my expertise	read only
220	SCH	PRESSURE Study Statement	Statement from clinical research team who are supporting the delivery of the PRESSURE Study at SCH	11/03/2025	No as not considered any other information	Yes	Yes	Yes	Reviewed and included in detail in reports
221	SCH	3042275 (1)	PRESSURE study full documentaton on the study	11/03/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
222	SCH	11-Procedure-for-the-Injectable-Drugs	Policy document	12/03/2025	No as not relevant to ambulance	nursing expert	Yes	Yes	Evidence of training
223	SCH	7-Procedure-for-the-administration-of-medicines_v7 (3)	Policy document	12/03/2025	No as not relevant to ambulance	nursing expert	Yes	Yes	Evidence of training
224	SCH	IV book 2022-2024	Policy document	12/03/2025	No as not relevant to ambulance	nursing expert	Yes	Yes	Evidence of training
225	SCH	IV WORKBOOK (revised) (002)	Policy document	12/03/2025	No as not relevant to ambulance	nursing expert	Yes	Yes	Evidence of training
226	Nurture Health and Care	YRS Meeting notes 20250122		22/01/2025	No as not relevant to ambulance	Yes	Yes	No as not my expertise	Reviewed and included in detail in reports

227	Nurture Health and Care	Telephone note GP Practice 20241224		24/12/2024	No as not relevant to ambulance	Yes	Yes	No as not my expertise	Reviewed and included in detail in reports
229	Peter Carter	Interview notes independent witness 20241219		19/12/2024	No as not relevant to ambulance	Yes	Yes	No as was not involved in reviewing care	Reviewed and included in detail in reports
230	Peter Carter	File note interviews		12/03/2025	No as not relevant to ambulance	Yes	Yes	Yes	Reviewed and included in detail in reports
		The documents listed in cells 222-235 may include items already referenced in the sections above. These documents were collated post-factual accuracy (from May 2025 onwards) and have been placed in an Addendum File for reference.							
		25.04.01 - Witness Statement oF Yusuf's Uncle dealing with contact with HMC - approved but not signed (sent to PC)_8246610_1			No	Yes	Yes	No	Falls outside ToR but read for context

Workstream 1 – Prof. Roland comments on Primary Care, Ambulance and Rotherham Emergency Department Care.

Workstream 2 - Dr. Elizabeth Whittaker comments on Sheffield Children's Hospital

Specialist Review Leads

Dr Elizabeth Whittaker - Paediatric infectious disease specialist

Professor Damian Roland - Consultant in Paediatric Emergency Medicine

This document addresses below questions as part of the Yusuf specialist review request.

The Surgery: Did the primary care service respond in line with national guidance in relation to their growing concerns for Yusuf's health?

Yorkshire Ambulance Service NHS Trust (YAS): Did YAS respond in line with national guidance in relation to their growing concerns for Yusuf health, this included specifically considering Yusuf's oxygen saturations?

The Rotherham Hospital NHS Foundation Trust (TRFT): Is there any clinical evidence to suggest that Yusuf's earlier admission to TRFT for IV antibiotics, would have possibly prevented Yusuf's death? What was the length of stay in ED and whether this was a contributing factor to the death of Yusuf?

1) The Surgery – First Presentation

Yusuf presented to his General Practice on the 15th November and was seen 12:36 by an advanced nurse practitioner. He is reported to have had a temperature for a couple of days and a sore throat. It is noted that he didn't have a cough or rash. His temperature was 37.3 and his FeverPAIN score was 4 for which he was prescribed antibiotics (phenoxymethylpenicillin) twice daily (following maternal request to have two bottles for one at school and one at home). His heart rate and respiratory rate do not appear to have been recorded.

Discussion Points:

- Documentation of core vital signs would be best practice.
- A fever pain score of 4 would be appropriate to treat with antibiotics and the BNFC does allow for a BD (twice daily) dose.
- If the family were happy with the antibiotic prescription and asking about an antibiotic regime that allowed him to be treated at home and school, in part, there was an implicit recognition they did not feel he was critically unwell at this stage.

- Yusuf was unvaccinated; it's not clear if this was recognised in the consultation. Given the presenting symptoms there was no specific cause for different interventions at this stage.

Conclusion

Yusuf presented with specific symptoms of tonsillitis of which the majority of cases are viral but the use of Antibiotics is indicated (via National Institute for Health and Care Excellence; NICE) if utilising the FeverPAIN score. It is likely given the observations taken in the Emergency Department that he did not have significantly elevated heart rate or respiratory rate at presentation to the General Practice meaning escalation of care at this stage was not warranted. It is good practice, but not a national standard to support verbal safety netting advice with a written record (ideally in the language of the patient/family). Yusuf being unvaccinated probably should have warranted specific safety net advice but the management strategy itself at that stage would not have been different.

Did the primary care service respond in line with national guidance in relation to their growing concerns for Yusuf's health? I believe they did.

2) Rotherham Emergency Department

Yusuf presented to Rotherham Emergency Department at 23:15 as the parents had been concerned about his condition. They called 111 for advice at 22:46 because he had been "*waking up jumping*" from his sleep. He was advised by 111 to attend the Emergency Department He was booked in at 23:21 and seen by a nurse for a triage assessment at 23:28. A weight and height was taken although there was an error in his height (with no clinical repercussions). His initial Paediatric Observation Priority Score (POPS) was 0. The PMH field in the initial notes entry report "Immunisations up to date". The reason for attendance is breathing difficulty and snoring (when he hadn't had this symptoms before) on the background of a recent diagnosis of Tonsillitis.

He was not seen until 05:17 in the morning. Before this point he had observations at 23:30, 00:33, 01:36 and 05:14. All observations were within standard parameters i.e. no evidence of concern apart from the observations at 05:14 in which the heart rate was slightly elevated at 113.

There were interactions between the family and the staff at 00:24, 00:42 and 01:05 01:37. Following the discussion at 01:37 Yusuf was moved into a cubicle. These interactions related to concerns in regards to Yusuf's breathing, his retching and the delay in seeing a doctor.

The doctor who reviewed Yusuf recorded that Yusuf was eating little but was drinking small amounts regularly. The clinician felt the diagnosis was tonsillitis and

extended the course of antibiotics. They document they reassure the caregivers regarding the snoring and document clear safety net advice.

He left the department at 05:35 and there is CCTV of walking out of the department holding his mother's hand.

Discussion Points:

- His time for assessment was within 15 minutes and given the pressures on the Emergency Department at that time (average wait was 225 minutes, with an average wait of 25 minutes for triage and 171 minutes from arrival to treatment) this can be seen as good practice. Recording both height and weight at triage is also good practice although the error on measurement highlights some minor issues on recording practices.
- It is known that Yusuf was not immunised however the entry in the Emergency Department initial triage/assessment records says he was immunised. It's not clear whether the doctor who reviewed Yusuf validated this information.
- While it is impossible to know if the observations recorded were definitely the observations obtained; the persistently low POPS is demonstration of a low acuity patient who didn't need further investigation and work up. In a study of over 24000 children only a tiny proportion (0.06%) with an initial score of 0 returned and needed to be readmitted [*Data available via Prof Roland*].
- There is debate regarding the potential severity of Yusuf's presumed dehydration. Not eating for even a couple of days in a child can be well tolerated if fluids are frequent and contain sugar. Noting this; best practice at the clinical review would have included a documentation of Yusuf's urine output as this is a good proxy measure for hydration status. As long as the child is passing urine then poor feeding alone is not an independent risk factor. However, failing to address dehydration as a cause of concern further increases caregiver anxiety.
- The wait to see a doctor was significant; however waiting times for review were prolonged across the country at that point. A number of observations were taken at a frequency which was commensurate with the acuity that Yusuf had presented in (given his low initial score 4 hourly observations would have been acceptable practice).
- Communication with the family which occurred on a number of occasions did not appear to be addressing their concerns. The video of Yusuf prior to arrival in the Emergency Department shows a child who is snoring with mild respiratory distress (it's subtle but there is some very slight suprasternal recession). Snoring in children is not uncommon, and not always pathological, however it can be a frightening experience for caregivers and there is a need to address what the cause of the snoring is and what the results of snoring may be.

- The clinical notes during the course of Yusuf's stay describe challenging interactions with the family. It will be difficult to ascertain cause, effect and attribution here but it is clear the family felt dismissed and the staff felt under pressure to action things they didn't think were necessary.

Conclusion

Yusuf presented with clinical signs of tonsillitis but caregiver concern with breathing difficulty. There is nothing in the clinical record to support significant respiratory compromise requiring urgent intervention. It is reasonable to say that caregiver concern was not addressed however and staff responses to the caregivers' implicit anxiety perhaps exacerbated underlying concern rather than providing reassurance.

Is there any clinical evidence to suggest that Yusuf's earlier admission to TRFT for IV antibiotics, would have possibly prevented Yusuf's death? ***I do not believe it would have done.***

What was the length of stay in Emergency Department and whether this was a contributing factor to the death of Yusuf? ***The length of stay was in excess of six hours, however observations were regular, reviews did occur and the final consultation was with the hindsight of a sequence of normal observations supporting the decision to discharge.***

3) The Surgery – Second Presentation

Yusuf's mother made a face-to-face appointment to see his GP and Yusuf was seen at 11:22 by a regular locum GP who had not seen Yusuf before.

Yusuf is documented has having a temperature (39.3C) a heart rate of 122 and no significant work of breathing. A respiratory rate was not recorded and neither were oxygen saturations as a paediatric pulse oximeter was not available. The GP felt Yusuf still had severe tonsillitis and altered the antibiotics to erythromycin (250mg/QDS). The GP advises Yusuf returns to the UECC at Rotherham Emergency Department that evening; "*don't wait past that evening for improvement before seeking urgent assistance*"

The family collect the prescription from a pharmacy and there are communications between the family and friends about their concerns for him.

At 12:35 Yusuf's uncle contacts the Children's Ward at Rotherham who explain they do not accept direct admissions.

Discussion Points

- During COVID there was a national roll out of pulse oximeters to GPs but there isn't a specific national standard suggesting all GPs should have an oximeter (to my knowledge).

- It is difficult to know if the safety netting advice was because the GP was undecided regarding the severity of illness or they wanted to reassure the family there was an action plan as the GP could sense that family were uncertain about management plan.
- It is not clear exactly what was said regarding the option of direct access to the ward but this would not be standard national practice (especially if the child had not been an inpatient recently) and therefore return to the Emergency Department is not an unreasonable course of action if immediate referral wasn't felt to be necessary.

Conclusion

It is likely that at that time he did not have specific red flag features warranting urgent intervention however the treatment decisions are not likely to have resulted in clinical improvement and it is likely that the caregivers underlying concerns have not been addressed.

Did the primary care service respond in line with national guidance in relation to their growing concerns for Yusuf health? On this occasion I think a different management plan would have been more appropriate.

4) Ambulance service response

A 999 call to Yorkshire Ambulance Service at 12:59 was made by Yusuf's mother.[**I have not seen the transcript of this call**]. The call is made a category 1 response on the basis that Yusuf's mother describes him as breathing but not awake and she was unable to wake him. She describes his tummy '*was really sucking in*'

The ambulance crew arrived at 13:04 (within national response time of 8 minutes). The initial observations included a Temperature of 38.5C, Heart Rate 160, Respiratory Rate 32 and Oxygen Saturations of 91%. He was given oxygen (2L) which was documented as dropping when his oxygen mask was removed.

At 13:48 Yusuf was transferred into the ambulance and the ambulance left of Sheffield's Children's Hospital at 14:00.

Discussion Points

- His Capillary refill time does not appear to have been documented and this is relevant as concerns regarding his level of alertness and tachycardia could mean he was in shock. His arrival observations in Sheffield are not consistent with clinical shock however.
- It's stated the diagnosis is tonsillitis but this is inconsistent with the presenting sign of low saturations.

- There was a challenge from the uncle (who wasn't present) in taking Yusuf to Sheffield rather than Rotherham. Given the clinical information available to the ambulance crew at that time it would not have been inappropriate to take Yusuf to Rotherham. The decision not to take him to Rotherham, or any delays relating to conversations around his disposition, I do not think altered the eventual outcome however.

Conclusion

The ambulance crew arrived to a child who had an oxygen requirement and a febrile tachycardia. The appropriate response is to convey this child to a secondary care facility which they did.

Did YAS respond in line with national guidance in relation to their growing concerns for Yusuf health, this included specifically considering Yusuf's oxygen saturations? Yes. Given the clinical situation of a child needing oxygen the outcome of the ambulance review would be to take this child to a secondary care facility which they did. Other urgent interventions, based on the information, were not mandated at that stage.

Yes. Given the clinical situation of a child needing oxygen the outcome of the ambulance review would be to take this child to a secondary care facility which they did. Other urgent interventions, based on the information, were not mandated at that stage.

5) Sheffield Emergency Department and initial hours of admission

Yusuf was brought in by ambulance and assessed by an emergency department doctor at 15.13, clerked for admission by a ward based paediatric SHO at 16.40, reviewed by the ward based paediatric registrar at 18.50 (and discussed with the paediatric Consultant on call, and the diabetes specialist consultant over the phone at this point) and seen by the ENT registrar at 21.00 (although there is a note with a verbal plan at 20.25).

Bronchodilator therapy was given at 15.10 (salbutamol 10 puff x 3). He received a dose of Dexamethasone (0.6mg/kg) at 15.50pm in ED.

The team noted that he looked unwell, but not septic, and the assessment included concerns regarding both upper airway obstruction due to tonsillitis, as well as wheeze and difficulty breathing associated with a lower respiratory tract infection. He was managed accordingly with bronchodilator therapy, corticosteroids (Dexamethasone at an asthma dose 0.6mg/kg) and IV antibiotics (Penicillin initially, with metronidazole added following discussion with the ENT team). A blood gas was performed at 18.34 which showed a normal pH and base excess, potassium of 2.69, glucose of 16.7 and lactate of 2.58. The blood glucose of 16.7 was felt to be a stress response, with a plan made to monitor to rule out diabetic ketoacidosis following

discussion with the on-call diabetic consultant. The raised lactate and low potassium were likely related to back-to-back salbutamol treatment - a plan was made for a repeat gas to confirm resolution. Lab bloods showed a raised white cell count of 16, with neutrophils of 14, but a reassuring CRP of 40. In addition his platelet count was 99, although this was not commented on. The registrar noted at 18.50 that the chest x-ray in ED was 'NAD'.

Discussion Points:

- A decision was made to treat with intravenous antibiotics. Local and national antibiotic guidelines at that time proposed IV penicillin for tonsillitis. However, for the management of complications of tonsillitis (which should be considered in a child who remains unwell after 5 days of penicillin at home) such as bacterial tracheitis, retropharyngeal abscess and Lemierre's Disease, recommendations are for IV ceftriaxone plus metronidazole or IV co-amoxiclav. These antibiotic choices cover a broader range of pathogens including beta-lactamase producing pathogens and anaerobic pathogens which are commonly found in the nasopharynx. The ENT team appropriately added metronidazole to cover Lemierre's disease which can present with tonsillitis, thrombosis (clot) of the blood vessels in the neck and necrotising pneumonia. There was no radiological evidence at presentation of this condition, but it is appropriate to consider that this may be developing in a patient with severe tonsillitis not responding to first line treatments.
- A throat swab sent on the 18th was reported at not showing haemolytic streptococci. Usually if other pathogens grow they would be reported. I cannot see a blood culture from admission in ED which would be best practice if starting IV antibiotics. Oral penicillin and erythromycin, as given in the community, may inhibit the isolation of organisms on both of these microbiological tests.
- The medical teams documented on a number of occasions that there were reassuring features not consistent with sepsis (normal capillary refill time, urine output, warm and well perfused, moist mucous membranes). Softer indicators of severe infection were noted – raised neutrophil count, slightly raised lactate 2.58, raised glucose - but the platelet count, which may be a concerning feature for severe infection, was not commented on. The assessment of the admitting team (including 4 different physicians) was that this did not meet the threshold to cover for a severe bacterial infection. Wheeze is usually a symptom of a viral infection, and alongside a CRP of 40, this is likely to have suggested a viral aetiology. In addition, a chest x-ray showed mild changes in keeping with a viral infection. This was described in the medical notes as 'NAD' and usually this means there was no evidence of significant consolidation or pneumonia, pneumothorax etc. Admitting for observation and repeated assessment is a reasonable plan at this stage. It is not documented, but the lactate, potassium and glucose results may all be

iatrogenic, that is, associated with the treatment of wheeze (corticosteroids and salbutamol).

Conclusion:

The emergency department team responded in a timely manner instituting appropriate management of a child with tonsillitis and presumed viral lower respiratory tract infections. A more broad spectrum antibiotic would have been a reasonable addition to his treatment plan, but it is unclear whether this would have altered his hospital course. The paediatric emergency doctor clerking did not form an 'Impression' or 'Differential Diagnosis'. The paediatric SHO who clerked Yusuf had the impression of 1. 'tonsillitis' and 2. 'LRTI' (lower respiratory tract infection). The Paediatric registrar who reviewed him did not document an impression or differential diagnosis. The differential diagnosis informs appropriate investigations and treatment. Without considering possible differentials, it is impossible to ensure appropriate treatment pathways are followed. The differential diagnosis should be reviewed regularly during admission, in particular if the patient is not following an expected pathway to recovery.

6) **Sheffield paediatric ward 19/11-21/11**

The ENT team documented a plan for joint ENT-Medical care for Yusuf. He was written up for three times a day 0.15mg/kg dexamethasone for upper airway obstruction as per the ENT team. A first dose was given at 9pm on the ward rather than starting the following day. This would be a total of 0.75mg/kg dexamethasone in a day rather than 0.6mg/kg. A datix was recorded to investigate this by the nurses.

Yusuf was reviewed by a senior registrar (ST8, about to complete training and become a consultant) at 23.30. The nursing staff had expressed concerns re stridor and increased work of breathing. On review, they noted that he was snoring, but without stridor (noise on breathing in due to airway obstruction in the neck). Oxygen saturations were 99% in 1 L low flow oxygen, RR 28 and HR 100, he was afebrile. There was good air entry with no wheeze on listening to his chest. They commented that he was settled, warm and well perfused at this point. The plan was to continue current care and to do a repeat blood gas as per previous plan. They did not document an impression, nor a differential diagnosis for Yusuf.

Overnight his oxygen requirement increased to 4L face mask oxygen following a reading of saturations of 95%. The maximum respiratory rate recorded was 32, with mild respiratory distress.

He was reviewed by the ENT team at 9am who noted he was out of oxygen and swallowing better. They proposed he could be discharged once eating and drinking normally.

At 12.15 he was reviewed by the paediatric team on the post take ward round (PTWR); signed as doctor which I interpret as the Consultant. At that time his observations were within normal limits. Between 9 and 12, he had dropped his oxygen saturations to 88% and 89% while off oxygen and corrected with oxygen therapy. On examination, no wheeze was noted. There were ongoing nursing concerns re stridor and the plan from this review was to consider escalation of management of upper airway obstruction (budesonide/adrenaline nebs). IV fluids were discontinued as he was drinking well and his observations were stable. Electrolytes were improved on repeat. The CRP and white cell count were not repeated. The documented impression was stable. No differential diagnosis was documented.

20.11.22

ENT review – noted ongoing slough on tonsils. They noted the chest x-ray from 18.11.22 showed no consolidation and commented on the oxygen saturations and lack of stridor. They proposed weaning oxygen with a lower threshold for oxygen saturations (94-98%).

The nursing notes record that Yusuf did not tolerate nasal cannula oxygen so was left on face mask. They noted that he was coughing more. His observations (RR, HR and oxygen saturations) were stable.

The medical team reviewed at 12.10 which was undertaken by the medical team – ST6. They noted the oxygen requirement with no wheeze. The plan was to continue IV antibiotics and to wean oxygen. Not recorded, but I note that salbutamol treatment discontinued on the drug chart. They documented a differential diagnosis at the start of the note of tonsillitis and LRTI, but did not form an impression nor update the differential diagnosis at the end of the note. At this point, despite resolution of wheeze, he remained in oxygen.

Family photographs from this day were reviewed.

Nursing notes in the afternoon comment on increased work of breathing, which subsequently settled. They also note his cannula tissued and was replaced. At 2am there were no concerns. The parents report that a doctor reviewed Yusuf between 2-3am, but this is not recorded by either the nursing or medical notes. The parents report that they were told his chest was clear at this time. There is a discrepancy between the parents report and video and the medical and nursing notes that I cannot explain.

21.11.22 6.30am Nursing team document the need for multiple pain relief overnight and an increase in work of breathing, but stable observations. On review of the observation chart, the observations (HR, RR, oxygen saturations) and recorded work of breathing were stable until just before 8am.

Nursing note written in retrospect for 07.30 reports moderate work of breathing and asks for a medical review.

08.15 Night doctor review (ST2). They document that he is complaining of chest tightness and pain on breathing, and that Mum reports worsening work of breathing overnight. His HR has increased compared to the last 24 hours (118) and respiratory rate is 32. They record a 'tight chest' with fine wheeze and prescribe 'burst' therapy (bronchodilator therapy with salbutamol and ipratropium). This resulted in better air entry and he is re-commenced on hourly salbutamol treatment. They do not record an impression or a differential diagnosis for the deterioration.

09.00 ENT ward round notes that the paediatric team should review the abdominal and chest pain. There is ongoing exudate on the tonsils and multiple small lymph nodes in the neck. They document a differential diagnosis of tonsillitis and LRTI/asthma.

09.30 day team review – note abdominal and chest pain with very abnormal observations (tachycardia, tachypnoea and low oxygen saturations). The impression is of a severe acute exacerbation of asthma with life-threatening features. An appropriate plan for escalation is made including intravenous access, bloods, blood cultures, chest x-ray, IV hydrocortisone and bronchodilator therapy with a reassessment every 20 minutes. Further reviews at 10.20, 10.40, 11.40 (with consultant) noted no significant improvement. A chest x-ray showed concerning right sided changes of pneumonia. A blood gas at 10.36 had a normal lactate (1.25), raised glucose (11.9), raised bicarbonate (31.8) with no evidence of acidosis (pH 7.34, BE 4.9) and mild electrolyte changes sodium 148, potassium 3.04).

His antibiotics were escalated to cefuroxime and metronidazole. Potassium was added to the intravenous fluids. He was given an adrenaline nebuliser and a magnesium sulphate infusion. An urgent PICU review was requested.

Bloods at this time showed a CRP of 28, albumin of 30, white cell count of 46 and neutrophils of 43, haemoglobin of 113, platelets of 78. Renal and liver function were largely unremarkable.

12.45 Transfer to HDU

Discussion:

- There was a drug error whereby an extra dose of dexamethasone was given. This is unlikely to have caused harm. The initial raised glucose may have been related to dexamethasone given in ED, or to have been a stress response. The team appropriately considered whether this was possibly diabetic ketoacidosis and made a plan to monitor this, on discussion with the on-call diabetic lead. Dexamethasone and other corticosteroids given for pneumonia or lower respiratory tract infections are known to improve

outcomes. Corticosteroids are routinely given as management of both upper airway obstruction and wheeze, as well as hypotension associated with sepsis. In severe infections and sepsis, hypoglycaemia (low blood sugar levels) are associated with poor prognosis and outcomes. On the other hand, stress hyperglycaemia is relatively well recognised. Stress hyperglycemia is due to elevated cortisol, glucagon, growth hormone, catecholamines, and various cytokines, which stimulate glycogenolysis and gluconeogenesis, resulting in a transient increase in blood glucose concentration that typically normalizes when the stress abates. It may also in this case have been associated with the use of dexamethasone. Respiratory illness, including asthma, is commonly associated with a stress hyperglycaemia response. A total daily dose of 0.75mg/kg/day is not an excessive dose although higher than the BNF recommended dose.

- Dexamethasone was given at 0.75mg/kg/day on 18th and then 0.45mg/kg/day on 19/20 and then discontinued (equivalent to 5mg/kg/day and 3mg/kg/day respectively). Patients taking glucocorticoids may not manifest common signs and symptoms of infection as clearly, due to the inhibition of cytokine release and the associated reduction in inflammatory and febrile responses leading to a failure in early recognition of infection. The adverse effects of corticosteroids are dose and duration dependent. The dose and duration which increases the risk of infection is unclear, but national recommendations for different management of infectious exposures (eg SARS-CoV-2 (COVID), Varicella (Chicken pox)) are all based on more than 2 weeks treatment. In trials and observational studies, children who receive 3-5 days of treatment for asthma do not demonstrate an increased risk of infections compared to controls, but do see short term benefits as measured by length of stay and severity of disease, if there is a history of previous wheeze or asthma.

  https://www.thelancet.com/journals/lanres/article/PIIS2213-2600(24)00041-9/fulltext

- Repeat bloods were sent on the 19th which confirmed an improvement of the electrolytes. The CRP and full blood count were not repeated. As the platelets were low and white cells raised on admission, this might have been good practice. Yusuf was afebrile following admission from ED (spiked to 38.1 during initial assessment). In addition there were no clinical indications that he was not responding to the antibiotics he was on, or that there was worsening infection/sepsis (he was afebrile, his tachycardia and tachypnoea improved, his blood pressure was stable and he was warm and well perfused and drinking/passing urine). The next set of bloods on the 21st showed that the CRP had fallen from 40 to 28. If there had been progressively worsening bacterial infection from the 18-21st, we might expect this to have increased. However, his white cell count had increased to 46 with neutrophils of 43. The

platelet count was still low at 78. He had completed three days of dexamethasone as part of upper airway management which may have contributed to the rising white cell count (a recognised phenomenon). As above, it is possible, but unlikely, that the short course of steroids resulted in the lower CRP level and absence of fever.

- There was clinical improvement based on observations, clinical notes and parental photographs from the 18th-20th November. The wheeze improved and bronchodilators were discontinued. Despite this, he continued to have an oxygen requirement. The working diagnosis was of tonsillitis and a lower respiratory tract infection. The admission chest x-ray was suggestive of a viral infection, as was the CRP on the 18th. However, it might have been reasonable to re-assess on the 20th to understand why he still had an oxygen requirement in the absence of wheeze. There is a lack of documentation of differential diagnosis, or re-assessment of the cause for admission and persistent oxygen requirement throughout his stay. Re-assessment might have included repeat bloods and a repeat chest x-ray. Based on the blood tests on the 21st, this may have shown a rising white cell count, but not a CRP. Whether this would have prompted a switch to broader antibiotic cover, and whether this would have changed the outcome is unclear. It is impossible to say whether chest x-ray changes might have prompted a change in antibiotics. Without more understanding of what caused the pneumonia, it is impossible to make a statement on whether IV antibiotics or earlier detection would have prevented Yusuf's death.

- Increased use of analgesia was noted by the nursing team on the 20/21st night. In retrospect this was likely pain due to a worsening pneumonic process. The recorded observations (heart rate, respiratory rate, oxygen requirement) did not show a clinical deterioration in the nursing record. It would have been reasonable based on the parental report of worsening cough, and the increasing need for pain relief to request a medical review. The parents report that Yusuf was reviewed by a doctor, but there is no documented review by either the medical or the nursing team.
- From the notes and observations, it appears that Yusuf deteriorated rapidly or decompensated on the morning of the 21st. Yusuf was identified to have features of a severe exacerbation of asthma. The team responded appropriately with treatment for wheeze. His PEWS score was between 4 and 8 over the hours of 8am-12pm and as per local guidelines, the team applied ward level interventions (bronchodilators, IV hydrocortisone, MgSO4, Adrenaline nebs etc), then consultant review and escalation to paediatric critical care.
- The blood test results on the 21st were suggestive of a leukaemoid reaction (low CRP, low platelets, high white cell count) which is strongly associated with infections, in particular pneumonia. Corticosteroids may contribute to a

leukaemoid reaction (as above, they can result in an increase in the white cell count). In a study of 656 children with a leukaemoid reaction, 40% had a previous clinically significant medical condition, most commonly asthma, prematurity and underlying genetic conditions. A leukaemoid reaction is associated with a longer length of stay of hospitalisation, but not increased mortality, unless associated with subsequent diagnosis of leukaemia.

- Documentation of who was present for each clinical review was not always clear. It is not clear that Yusuf was reviewed by a Consultant on admission, as per recommended national guidelines.

Conclusion:

Yusuf responded to the initial treatment and demonstrated a clinical improvement. Earlier re-assessment of an ongoing oxygen requirement with a repeat chest x-ray and bloods may have identified a developing pneumonia sooner, however, the absence of worsening fever, respiratory rate and heart rate were potentially falsely reassuring. It is possible the appropriate use of corticosteroids to treat airway obstruction and severe tonsilitis masked the development of a bacterial pneumonia. Given the initial presentation of a viral infection, then a subsequent deterioration with pneumonia, this may represent a secondary bacterial infection following a viral infection.

Overall there is no recorded evidence of medical reviews occurring due to raised PEWS scores as per recommended guidelines.

Specific concerns raised by the parents

1. The family note a delay in reviewing the x-ray from the 18th November and asked if it had been reviewed prior to the 21st, whether this would have demonstrated the severity of the presentation and changed the course.

Chest x-ray 18.11.22 review – the paediatric ED doctor and the ENT doctor both comment on this chest x-ray in the notes. The ED doctor commented that it was ‘NAD’. The ENT doctor commented that there was no consolidation. Although not explicitly documented this will have informed the antibiotic choice as there was no clear evidence of bacterial pneumonia and no features of necrotising pneumonia as seen in Lemierre’s Disease. Based on this, there was no indication for different management which could have altered the outcome. The chest x-ray was reviewed by the treating doctors on the 18th and there was no indication for a change in management that could have changed the course of the illness. The formal radiologist report on the 19th confirmed their assessment.

2. The family expressed concerns regarding continuity of care and a lack of oxygen monitoring.

The notes provided demonstrated regular monitoring of oxygen levels and other observations including respiratory rate, heart rate and work of breathing. As above, some of these parameters improved, while Yusuf remained in oxygen despite attempts to wean. There was ongoing monitoring of routine observations including oxygen saturations. Re-assessment of the diagnosis based on the persistent oxygen requirement may have prompted different investigations and treatment.

3. The family expressed concern about a review in the early hours of the 21st which was inconsistent with the review in the morning of the 21st.

I cannot find any evidence that this review happened. The recorded observations during the night of the 21st did not indicate a change in his condition until the morning. There is a discrepancy between the parents report and video and the medical and nursing notes that I cannot explain.

There is no recording of a review, however based on the change in his painkiller requirement and parental concerns this would have been a reasonable thing to do. The recorded observations were however reassuring so it is unclear whether this would have altered the management and course of illness.

4. The family expressed concerns that Yusuf was not seen by a consultant between 18th and 21st November. They also expressed concerns regarding the experience of the medical staff available during the stay.

The admission medical notes show that Yusuf was seen by a member of the middle grade rota within 4 hours as per national standards.

https://www.rcpch.ac.uk/resources/facing-future-standards-acute-general-paediatric-services

In addition, they documented a discussion of the plan for the child as discussed with the on-call consultant. Yusuf should have been seen by a Consultant within 14 hours of admission. The documentation of the 'PTWR' (post take ward round) does not clearly state which members of the team saw him, although it appears to have been the consultant, the documentation should be easier to understand. This was just over 14 hours. Subsequent to this, the recommendation is that a consultant paediatrician holds a medical handover every 12 hours. This is not routinely documented in the notes. Yusuf was seen by a consultant at least once, but the documentation of who reviewed him and when is inadequate. It is not clear from the documentation who the lead consultant responsible for this care was as both the ENT and Paediatric teams were making recommendations although as part of the Factual Accuracy and interviews, there was a lead consultant identified which was present on the CareFlow system.

Admission HDU/PICU
12.05 - note written in retrospect by Paediatric Critical Care Unit (PCCU) Consultant

Impression: increased work of breathing - query secondary to wheeze or upper airway obstruction. Recommended MgSO4 infusion and review by Anaesthetic, ENT And PCCU teams.

Plan for admission to PCCU +/- intubation +/- hot tonsillectomy

Broaden antibiotics to cover for lower respiratory tract infection/pneumonia – Cefuroxime

13.30

Trial of High flow nasal cannula oxygen (HFNCO), on 8L non re-breather mask, severe work of breathing (WOB)

14.30 persistent work of breathing, drowsy. Gas acceptable (high HCO3) Commenced aminophylline

15.00 significant improvement, alert, playing on tablet, but continuous work of breathing and oxygen requirement

17.00 CXR possibly consistent with Lemierre's syndrome, but clinically not consistent (afebrile, no neck pain, no lymph node enlargement). Discussed with micro – switch cefuroxime to ceftriaxone, continue metronidazole. Discuss further imaging with radiology

19.30 Persistent work of breathing – inspiratory more than expiratory. Decision made to intubate

20.00 - record of intubation

Noted easy face mask ventilation. Nasal tube inserted (after attempt at oral tube)

Note at 22.00 written in retrospect explaining reason for intubation to parents by PCCU consultant (tiring, multiple desaturation events, risk/benefit decision)

00.30 22.11.22

Right radial arterial line insertion

01.30 night review PCCU ANP

Thick creamy secretions

Minimal pressure settings, but high oxygen requirement 85-90% Fi02 with sats 89%

Bloods reviewed – platelets 61, CRP 69, white cell count 44

Dexamethasone stopped

07.20 physiotherapy note

09.15 - ENT Review – for imaging given concern re Lemierre's

Morning clinical note – updated 10.15

3 x fluid boluses (10ml/kg overnight as tachycardia and hypotension). UO >1ml/kg/hr

In 100% oxygen, relatively low pressure settings

Plan for DNAse nebs, wean aminophylline

11.00 neck imaging not consistent with thrombophlebitis (and hence unlikely to be Lemierre's)

16.30 - written in retrospect – deterioration around 1pm

Desaturating with increased work of breathing, low blood pressure – given fluid and sedated to aid ventilation

Repeat chest x-ray shows worsening consolidation on right and left, ETT in correct position, no pneumothorax. DNAse given in case plugging of tube. 2 x 10ml/kg fluid boluses

Central venous access obtained. Started on noradrenaline (for blood pressure) and nitric oxide (to oxygenate).

Two physiotherapy notes during this period.

19.00 - note written in retrospect

Attending patient from 17.00

Type I respiratory failure, poor oxygenation on high pressures, no improvement nitric oxide. Good cardiac output. Oxygenation index 30.

Attempted prone ventilation (lying on his front). Aim for HFOV (high frequency oscillatory ventilation) if not improved in 2 hours

To consider ECMO if not improving on HFOV

Add clindamycin

Noted Leukaemoid reaction – for blood film and addition of anti-fungal -to discuss with microbiology

20.40 - discussion with microbiology

For Blood borne viral screen (HIV, Hepatitis B/C)

For fungal biomarkers in blood

Switch ceftriaxone to meropenem

Start intravenous immunoglobulin (for query staph infection –presume they meant toxic shock)
start tamiflu (oseltamivir, an antiviral medication for flu) and caspofungin for fungal treatment

21.30 ? The team considered whether this could this be an atypical presentation of mycoplasma pneumonia – add clarithromycin and send mycoplasma PCR

23.30 - Consultant note - ongoing difficulties with oxygenation

Leukaemoid reaction – thick blood in lungs ? Role exchange transfusion? Or role of hyperhydration Discussed with haematology consultant – unlikely to help

Microsoft Teams meeting with other intensive care team consultant – for HFOV, hold off IVIG, cautious hyperhydration

Discussed with family (parents and Uncle)

23.00 - ANP night note

Ongoing ventilation issues, hypotensive (on two inotrope medications to support blood pressure), anuric AKI, (acute kidney injury), liver injury (raised transaminases)

Sepsis - CRP 141, white cell count 63, on multiple antimicrobials, 90mls/kg fluid bolus over 24 hour period

05.20 - night fellow contacted consultant re oxygen saturation of 82% in 100% oxygen HFOV, anuric. Noted to have a high potassium 6.3

Plan for frusemide and to manage potassium (give calcium to protect the heart)

16.09 - in retrospect

Hypoxic episode and cardiac arrest at 09.15

Initial PEA – due to hypoxia (low oxygen) and high potassium

Given adrenaline and CPR – regained circulation, but re-arrested several times

Then developed pulseless ventricular tachycardia (VT) -attempted cardioversion (electric shock), very difficult to ventilate and oxygenate with hand bagging. Given medicine for arrhythmia (amiodarone). Cardiac ultrasound (ECHO) showed poor heart pumping (ventricular function)

Declared dead at 11.17, RIP.

Discussion:

The PCCU team attempted to avoid intubation and ventilation, as is noted best practice for difficulty breathing in association with wheeze/asthma.

They appropriately discussed the care both within their team and seeking expert opinions from other teams (ENT, Microbiology, Haematology).

Despite their interventions Yusuf continued to deteriorate and became increasingly septic and difficult to ventilate.

Based on the notes, I would suggest the cause of death as

1a Sepsis

1b pneumonia

1c tonsillitis

2 Asthma

Evidence of sepsis – rising CRP and white cell count, leukaemoid reaction which is likely to reflect a severe infection, in association with hypotension (>90ml/kg fluid bolus in 24 hours; need for two inotropic agents to support blood pressure), acute kidney injury and acute liver injury.

The chest and pneumonia is the likely source of sepsis. This was complicated by wheeze and reactive airways disease.

It is possible that the infection originated in the tonsils initially and spread. It may also be possible that he had a viral infection in his upper respiratory tract (tonsils etc) which caused damage to the mucosal lining, and allowed entry of bacteria to the bloodstream. Secondary bacterial infections after a viral infection are well recognised with examples including *Streptococcus pneumoniae, Haemophilus influenzae* or *Staphylococcus aureus* bacteraemia/pneumonia after a wide variety of viruses (parainfluenza, adenovirus, influenza etc).

Of note, no pathogens were found. The mycoplasma PCR was negative, as was an extended respiratory viral panel. Cultures were all negative (blood, urine, endotracheal secretions). Fungal markers were negative. A blood borne viral screen was negative (HIV and hepatitis).

A post mortem might have been more conclusive as deeper samples could be sent for microbiology. In addition, it is possible that Yusuf had an underlying genetic condition which resulted in him responding this way to an infection – tests for a primary immune deficiency might have provided an answer. Functional immune assays would have been difficult to interpret in a severely unwell child, but a sample could have been sent for genetic mutations associated with inborn errors of immunity (IEI).

Workstream 7

Specialist Review Lead: Sara Melville – Nurse Consultant in Paediatric Vascular Access

Background

This report is a review of the care provided to Yusuf during his inpatient stay in SCH in relation to the nursing care received, including the intravenous therapy and vascular access aspects of his care.

Information received from both the trust and from the family of Yusuf have been utilised to review the care provision during the admission. The focus of the review focuses from the date 18th November 2022 to the 21st November 2022 covering the time from A&E admission to being transferred from the Ward to HDU.

Vascular Access and Intravenous Therapy Timeline

18th November 2022

18:30 Intravenous (IV) cannula inserted left hand and bloods taken, documented in nursing notes.

18:30 Photograph from family shows cannula left hand, wrap around bandage is in place.

19:15 Benzylpenicillin given

20:00 Metronidazole not given.

21:30 Nursing notes document IV flushed/IVI (intravenous infusion) running. Nursing notes state 'Happy for ward.'

22:00 Fluid balance chart commenced for infusion fluids on the Ward.

23:00 Admitted to short stay ward. Nursing notes 'currently on IVI and IVAB's.' (Intravenous antibiotics)

Care plan 42 IV cannula date commenced 19/11.

19th November 2022

01:00 Benzylpenicillin administered

01:00 Metronidazole administered

01:45am Nurse note 'cannula positional'

05:15am Nurse note ‘cannula very positional, redressed, kinked. Pressures on pump remain high.’ Nurse note ‘no redness or swelling to site’

Day shift

09:00 VIP (Visual Infusion Phlebitis) score recorded

11:00 VIP score recorded

07:00 Benzylpenicillin administered

13:00 Benzylpenicillin and Metronidazole administered

13:00 Fluids on balance chart recorded as stopped.

13:30 Nursing note: ‘IV fluids discontinued after discussion with [ENT Registrar]’

20:00 Benzylpenicillin administered

23:30 Metronidazole administered written up for 20:00

20th November 2022

01:00 Benzylpenicillin administered

04:00 Metronidazole administered

06:30 Nurse notes ‘IVAB’s given as prescribed.’

11:00 Photo from family shows that a cannula is in Yusuf’s left hand

12:43 Photo from family shows cannula is still in Yusuf’s left hand

13:00 Photo from family shows no cannula is in place and local anaesthetic cream is in place. Nursing notes document ‘cannula tissued. Looks quite flat and tired.’

15:00 Benzylpenicillin administered

15:30 Metronidazole administered

15:51 Photo from family with cannula now placed in right hand with a wrap-around bandage with a knot in it.

17:00 Nursing note ‘recannulated right hand, IVAB’s given and Fluids recommenced ½ maintenance fluids 27ml/hr.’

20:00 Metronidazole given. Only 1 signature.

23:30 Benzylpenicillin administered

21st November 2022

02:15 Nurse note 'paracetamol given at 21:00. ½ maintenance fluids running, cannula working well. No concerns at present.'

05:00 Fluids stopped

05:30 Photo from family shows blood and fluid-stained bandage and wet bed and sheets with both fluid and blood present.

06:00 Benzylpenicillin administered

07:00 Metronidazole administered

06:30 Nurse note 'multiple pain relief given, occasional WOB. When awake in pain. Bandage wet and covered in blood, port loose.'

13:10 Nursing note cannula noted to not be working and had been prescribed several IV medications following review by medical Registrar. Note says IV stopped and recannulated.

Discussion

Cannula insertion and fixation:

There are no records of insertion for any of the cannula undertaken as per the recommendations of the Royal College Nursing (RCN) Standards for Infusion Therapy (2016). The trust guidelines provided as those in use at the time (2022) were dated to be reviewed in 2015. It was noted that extra wrap around bandaging was applied to all cannulas. It was noted that ANTT practice is not integrated into the guidelines.

Drug administrations

A dose of metronidazole on the 18/11/22 at 20:00 hrs has not been administered, as it is not signed for as being given. There is no documentation to explain why this dose was not administered. The following dose was prescribed for 04:00hrs 19/11/22. This dose is administered but is timed with the signatures as being administered at 01:00hrs. There is no documentation to ascertain if this was representative of the 04:00hrs dose being administered early or the 20:00hrs dose being administered late. It is however clear that a single dose was missed, for reasons that cannot be ascertained.

Vascular Access Guidelines

The trust guidelines provided as those in use at the time of Yusuf's admission were dated to be reviewed in 2015. They were limited in their scope and guidance for staff. However, within these guidelines it did state that pump pressures, site checks were to be recorded hourly.

It was noted that the VIP scoring was not undertaken from the 20th - 21st November whilst a continuous infusion was being delivered, or during drug administrations. Therefore, it is not possible to ascertain if the bandaging was removed, as there is no documentation or records to support this. Without a VIP score demonstrating the visualisation the insertion site and areas surrounding the cannula by removal of the bandage, it is not possible to confirm if the fluids and IVAB's administered were being administered effectively during this time. This falls below the expected standards of care that should be delivered.

No pump serial numbers were noted down, although pump serial numbers were required on the fluid balance chart. Documenting the serial number of a pump enables the pump to be identified and facilitates the download the information contained within it. For example, pressure alarms, pump pressures, start/stop buttons being used etc. which would be useful in intravenous therapy incident investigations.

There was no designated place within the fluid balance chart to facilitate the recording of the pump pressures, which means that staff were unable to comply with the trust's own guidance. Pump pressures are another indicator informing staff of the work that the pump is having to use to deliver an infusion but will not inform staff of where the fluid is being delivered. Hourly pump pressures and volumes infused are to be used in collaboration with hourly VIP scoring for a complete assessment of the effectiveness of the delivery on intravenous therapy.

Training in preparation and Administration of Intravenous Therapy.

There does not appear to be a role within the trust with specific responsibility for the oversight of all vascular access training and clinical practice, consequently there is no consistent oversight of training and education, policies and guidelines and monitoring/auditing of clinical practice. The Medicines Management Code from the trust refers to 'Those nursing staff with extended roles and responsibilities will access specialist training as identified through their PDR for example IV training.' IV therapy and its administration and care of devices is integral to the nursing role and is not regarded as an extended skill. The competency booklet provided was in relation to medicines management, not for Intravenous therapy administration competence. The booklet provided did not incorporate the skills of vascular access site assessment and observations, the positive pressure flushing of vascular access devices, administration of intravenous therapy, as well as other skills in caring for, maintaining and utilising vascular access devices via peripheral and central venous access. Although the trust has provided an updated version of this document these issues have not been addressed and the competency document remains very drug management focussed rather than the clinical skills and knowledge required to practice intravenous therapy safely and competently.

Having conducted interviews with the staff all report having attended a study day initially, but they have had no further standardised updating or refresher training since their initial training, in some cases this is over several years. Any updating has been

done locally by practice educators and was reported as being mainly new drug related with information being cascaded to staff.

The Information provided regarding the content of the study days for intravenous therapy does not appear to follow the content recommendations set out by the RCN Standards for Infusion therapy (2016). The programme that is run needs to be reviewed and the content changed to ensure that the recommended content requirements are met in future program planning to ensure that staff have the knowledge and skills to practice safely.

Cannula leaking

In the nursing notes at 06:30am 21st November 'Bandage wet and covered in blood, port was loose.' As no site inspections/VIP scores were documented over the entirety of the night shift, it cannot be ascertained when the leaking had started. Although the nurse notes document at 02:15am that the cannula is working well, it cannot be ascertained how this assessment was made as there is no VIP documentation to support this assertion. The bandages were extremely wet and there is a photograph provided by the family showing wet sheets and the pillow also blood stained. This is suggestive of the leaking having occurred sometime earlier in the night, although it cannot be established at what time this occurred as there are no VIP scores documented. Consequently, it can be ascertained that the maintenance fluids were not being effectively administered, with the bed and sheets and pillow showing to be wet and blood stained. It is also not clear if the bandaging was removed on each drug administration, or hourly, when the infusion was running to undertake a visual inspection of the vascular access site and surrounding areas to assess for any clinical signs of complications or leakage from the exit site of the cannula. Any leakage during drug administration, or fluid infusion, would have soaked into the bandage first before being able to absorb into the sheets. Due to this leakage and with no evidence of the bandages being removed to undertake VIP assessments during these times, it remains unclear if the drug and fluid therapy were being delivered/administered effectively. Having interviewed the nurse from this shift regarding VIP scoring she responded that if giving a bolus/short infusion she would remove the bandage and assess the status of the cannula observing for redness, swelling during the pre-administration flush. For continuous infusions VIP scoring would be done hourly, overnight she would leave a 'window' in the bandaging to look through, overnight she would look through the window but would not want to wake the child if they were asleep to remove the bandage. From interviews with the other nursing staff this appears to of been custom and practice to leave a window in the wrap around bandages, so as not to disturb the child. She did understand that VIP scoring should be recorded hourly but could not account for why this had not been done.

This falls below the expected standards of care that should be delivered.

Recommendations

Cannula insertion and fixation:

The trust needs to develop and implement a cannula/vascular access insertion document. All guidelines need to be updated using the most up to date evidence available. National and international guidance for bandaging at the time of Yusuf's admission clearly states: 'Wrap around bandages are no longer recommended practice' (INS 2021). Tubifast should be used as alternative should extra protection be required, this aids in the ease of visually inspecting the exit site and observe the device and surrounding areas for signs of complications. An updated standardised guideline for insertion and fixation of cannulation needs to be developed and incorporate Aseptic Non-Touch Technique (ANTT), appropriate dressing and its application and suitable extra bandaging (Tubifast), if required. It should also include the maximum number of attempts for a cannula insertion and how to escalate and to whom.

Vascular Access Guidelines

A comprehensive review needs to be undertaken for all guidelines within the trust in relation to vascular access and intravenous therapy. New guidelines need to be developed incorporating the most recent guidance available. ANTT needs to be an integral part of all aspects of preparation and administration of intravenous therapy, care and maintenance guidelines for vascular access devices. All care plans need to reflect current up to date guidance and cross reference with the guidelines. The intravenous therapy ward patient documentation needs to be completely reviewed to ensure it enables staff to document the required information as per the guidelines.

The guidelines need to be more comprehensive and provide clear details and information of clinical practice guidance in all aspects of clinical practice related to intravenous therapy and vascular access. The trust also needs to incorporate Vessel Health and Preservation (2020) into their vascular access guidance to act as a decision aid for staff to promote the use of the 'Right line, at the Right time'.

Training and Medicines Management Code

The trust needs to undertake a thorough review of it medicines management code to reflect that intravenous therapy is not regarded as an extended role within nursing but is now integral to nursing practice. It should include descriptions of what training different members of the MDT should be undertaking and how competence is assessed. It should also include supervised practice and competency assessment process and update requirements.

Intravenous therapy and vascular access training programmes should not be held locally by individual areas, it should be standardised across the trust to provide reassurance and facilitate governance of safe practice trust wide.

Monitoring of Clinical Practice

The trust needs to implement and use best practice guidance and audit accordingly. For example, Device Related Infection Prevention Practice (DRIPP) in relation to intravenous therapy and vascular access devices. To monitor and improve all clinical practice in relation to vascular access and intravenous therapy.

Vascular Access Conclusions

The standards of care received fell below the standards of care that are expected, documentation was sporadic in relation to care and maintenance of vascular access devices. Documentation did not enable staff to comply with the trust own guidance for documenting care and maintenance. The training provided by the trust is lacking in oversight and coordination from initial training programs and an absence of update sessions. The IV training programme does not cover nationally recommended areas of theoretical knowledge. The competency booklets are reflective of medicines management and do not reflect the clinical skills of safe vascular access practice. Guidelines in use at the time were out of date and did not reflect current evidence based recommended practice and were very limited in the content. There is a lack of practice auditing to monitor practice standards and this needs to be addressed using national tools available (eg. DRIPP). The Medicines Management Code does not reflect the integral role of intravenous therapy in nursing practice and does not reflect the training requirements for members of the MDT.

This highlights that there is a significant need to have a designated specialist role for vascular access and intravenous therapy. This role currently does not exist which has created the lack of updating policies and guidelines, inconsistent training and education provision and a lack of governance in clinical practice, with standards falling below what is to be expected.

Paediatric Early Warning Score (PEWS) and Escalation

PEWS timeline 19th-21st November

19/11/22

01:54 PEW 3+ observations repeated hourly as recommended remains at 3+ until 6:28hrs when PEW 2+

07:00 PEW 3+ observations repeated at 15minutes and 25 minutes.

07:44 PEW 7+ observations repeated

07:56 PEW4+

09:28 PEW 6+ remained from 09:30 at PEW4+ and 3+ until

15:46 PEW 7+ observations repeated 1 minute later and recorded as PEW 3+.

18:28 PEW 4+

20:30 PEW 2+ until below.

20/11/22

04:06 PEW 3+, recommended to do observations hourly, not repeated until 05:57hrs.

07:50 PEW 3+ recommended observations repeated hourly, repeated as below time.

08:25 PEW 4+ recommended observations repeated hourly, actually done at 09:13hrs.

12:10 Reviewed by medical team, see medical notes. Record of observations are seen in corner of page but appear to be from medical review on the 19/11/22.

12:54 PEW 3+, should repeated observations hourly

13:58 observations repeated, PEW2+ recommended observations 4 hourly, repeat observations done 1 hourly then 3 hourly PEW2+

19:04 PEW 4+ recommended to repeat hourly

19:39 PEW2+ remained same until midnight

21/11/22

00.02hrs PEW6+ recommended repeat observations in 15 minutes

01:04 hrs PEW 2+

03:03hrs PEW2+

05:58hrs PEW2+

07:59 hrs PEW4+

09:18 hrs PEW6+

09:30 hrs PEW 7+

Discussion

The guidelines for use of the PEWS system and Vital signs recording were noted to be in place and up to date. Having met with the Matron for Digital Technology, and the digital clinical educator nurse, it has been established that the CareFlow Vitals E-Observations system was introduced in June 2022. There was a planned and stepped process for implementation beginning with introduction of the new system to staff within the clinical area, with the appropriate training being provided. This was done by training staff face-to-face with approximately 80% of staff being trained in this face-to-face manner. All aspects of the system were explained to staff for the safe implementation of the system to the trust. At the time of implementation, it was agreed with the senior team that the system, at this time, would not include the enabling of the automatic notifications of high PEWS being delivered to ward teams, as there were concerns regarding ‘alarm fatigue’, which is a recognised issue. The PEW score is generated by the system from the observations that are inputted by the nursing team

caring for the patient, the system does not allow for observations to be back dated, or added retrospectively, therefore reflect the data that was inputted at the time recorded.

It is felt that the training and implementation of the system to the trust was safe and appropriately undertaken and delivered to staff. At the time of Yusuf's admission automatic notifications were not enabled on the system. It is also noted that the automatic notifications, even if enabled would not be used to replace the nursing team following the escalation guidance.

Throughout Yusuf's admission to the Ward, clinical observations were recorded using CareFlow Vitals E-Observation System, these were measured by the PEWS tool. It is unclear if the trust escalation pathway was followed for PEWS 3 and above. It is unclear if the trust escalation guideline for PEWS 6 and above was followed.

Yusuf was seen by medical team (medicine) at 23:30 on the 18/11/22.

19/11/22 at 01:54 until 06:28: Following trust guidance a PEW 3+ staff should inform the nurse in charge and consider escalating to on-call doctor. Nursing notes at 05:15 hrs state that registrar is aware of stridor but not concerned as intermittent. However, there are no further medical notes following from 23:30hrs on the 18/11/22 to say that a review had been undertaken by the medical team overnight and what the outcome/actions were.

07:44 PEW 7+ Following trust guidance a PEW 7+ staff should inform the nurse in charge and escalate to on-call doctor. It is unclear if actions were taken as there is no documentation to confirm the escalation or the PEW 7+.

07:56 PEW 4+ Following trust guidance a PEW 4+ staff should inform the nurse in charge and consider escalating to on-call doctor. It is unclear if this action was taken as there is no documentation to confirm the escalation, or the PEW 4+.

09:00 Medical (ENT) notes are contradictory to the vital signs that were taken earlier, as notes state, 'not on oxygen this morning' and that 'from ENT POV can go home when E&D solid food.' When not on oxygen as per vital signs print out, Yusuf's oxygen saturations were down to 89%. PEW 7+ was not referred to, nor the ongoing oxygen requirements to maintain oxygen saturations.

09:28 PEW 6+ Following trust guidance a PEW 6+ staff should inform the nurse in charge and escalate to on-call doctor. It is unclear if this action was taken as there is no documentation to confirm the escalation, or the PEW 6+.

12:15 Medical notes (Medicine) continue IVAB's and stop Iv fluids, no records of PEW 6+ contained within medical notes.

09:30-15:46 PEW 3+ and 4+

Nursing note 13:30hrs no record of PEW 6+, although does note increased WOB when asleep and continuing oxygen requirements

15:46 PEW 7+ Following trust guidance a PEW 7+ staff should inform the nurse in charge and escalate to on-call doctor. It is unclear if this action was taken as there is no documentation to confirm the escalation or the PEW 7+. Recommended

observations to be repeated in 15 minutes but was repeated after 1 minute with a PEW 3+. No medical review notes.

16:30 Nursing notes no mention of PEW 7+, actions taken or events that occurred.

18:28 PEW 4+ Following trust guidance a PEW 4+ staff should inform the nurse in charge and consider escalating to on-call doctor. It is unclear if this action was taken as there is no documentation to confirm the escalation, or the PEW 4+.

No further medical notes from 19/11/22 at 12:15 until the 20/11/22 time not documented by ENT. Seen by medicine on 20/11/22 at 12:10 hrs.

04:06 PEW 3+ Following trust guidance a PEW 4+ staff should inform the nurse in charge and consider escalating to on-call doctor. It is unclear if this action was taken as there is no documentation to confirm the escalation, or the PEW 4+.

Nursing note on 20/11/22 at 06:30hrs see as documented.

Yusuf was seen by medical team (medicine) on the 20/11/22 at 12:10, the medical notes show he was not reviewed again by a medical team (medicine) until the following morning at 08:15 hrs following concerns raised by ward staff.

At 12:35 on the 20/11/22: Following trust guidance a PEW 3+ staff should inform the nurse in charge and consider escalating to on-call doctor. It is unclear if this action was taken as there is no documentation to confirm the escalation, or the PEW 3+. Although it is noted that repeat observations were taken as recommended.

At 19:04 on the 20/11/22: Following trust guidance a PEW 4+ staff should inform the nurse in charge and consider escalating to on-call doctor. It is unclear if this action was taken as there is no documentation to confirm the escalation or the PEW 4+. Although it is noted that repeat observations were taken as recommended.

At 00:02hrs on the 21/11/22: Following trust guidance a PEW 6+ staff should inform the nurse in charge and escalate to on-call doctor. It is unclear if this action was taken as there is no documentation to confirm the escalation, or the PEW 6. There are no medical review notes. The nursing notes at 02:15 have no mention of the PEW 6 and state ‘observations stable and apyrexic other than ventilation in 4L of oxygen’. This is contradictory of the observations recorded and the PEW score at 00:02hrs. It is also noted that the recommendation in the PEW system to repeat observations in 15 minutes was not undertaken. Observations were not repeated until 01:04hrs. The video provided by the family taken at 01:14hrs is more in alignment with the PEW recorded at 00:02hrs, but is contradictory to the PEW at 01:04hrs and the nurse note at 02:15hrs.

01:14hrs on the 21/11/22 a video of Yusuf provided by his family, shows a child in significant respiratory distress. This video evidence does not correlate with the PEW Score of 2+ recorded at 01:04hrs. The monitor Yusuf was on can been seen in the background showing a HR of 137, this does not correspond with the recorded HR in the PEW undertaken at 01:04hrs. It cannot be ascertained why there is such a discrepancy between the video evidence, the saturation monitors figures and the recorded PEW.

During the interview with the nurse in charge of the night shift of the 20/11/22 she was asked about patient allocation and what her role as nurse in charge entailed. She said she would attend handover and then allocate 3-4 patients per nurse; she would allocate the more notably sick patients to the next most experienced nurse but would ensure that the allocation did not mean they had all the more high acuity patients. She also gave an example of; If nurses had looked after patients the previous night and requested patients were reallocated to them for continuity of care, she would accommodate this where possible. As nurse in charge, she would also be responsible for support the support worker staff in caring for their patients. She could not remember if she had her own allocation of patients the night of the 20th of November 2022. She had no recollection of a doctor attending the ward during the night shift. She said as nurse in charge of the ward, she would expect to of been made aware that a doctor had been called to review a patient, by the nursing team. She also said that if a doctor had attended the ward, she would expect to see them and to be able to see the written notes of the review, or any discussions that took place. She has no recollection of being informed of the need to escalate for a doctor to undertake a patient review by the nursing team. As the nurse in charge that shift, she does not remember having the need, or being asked to come and see Yusuf, during the night by the nursing team. On viewing the video taken by Yusuf's Mum at 01:14am she assessed his work of breathing as moderate respiratory distress.

It is noted that the staff on shift on the morning of the 21st November from 07:30hrs were immediately concerned by Yusuf's condition and actioned this appropriately and promptly with a medical review being undertaken and written up at 08:15hrs. During the interview with the member of staff from the day shift who took over care for Yusuf at this time, she stated that she could not remember anything particularly remarkable being mentioned at handover of patients and their conditions. She was not in charge of the ward but was his allocated nurse for the shift. At approximately 07:40am she entered his bedspace as the infusion pump was alarming which she presumed had woken him up, as he had been asleep beforehand. She was immediately concerned he was in moderate respiratory distress. She bleeped the doctor on call and gave the salbutamol, which was prescribed PRN, whilst she was waiting for the doctor to attend the ward. She remembered that the doctor attended the ward quickly and prescribed further back-to-back nebulisers as per the protocol, the administration of which takes around 30 minutes. At the end of this course there was no response, or improvement in Yusuf's respiratory condition. She said the doctor had gone to discuss Yusuf's condition with more senior colleagues and attend handover of the medical teams during this 30-minute administration time. She recalls mum being very clear that she was very concerned regarding Yusuf's breathing and his work of breathing during this time. On showing her the video (01:14 hrs video) taken by Yusuf's mum, she assessed it as moderate work of breathing and said that it was very much the same as the work of breathing, she actioned at 07:40hrs due to her concerns for his work of breathing.

Capillary refill times were completed with each set of observations taken within the Accident and Emergency department and 3 blood pressure reading were recorded between 20:45 and 22:53 hrs.

It is noted that through his admission to the Ward limited blood pressure reading or capillary refill time readings undertaken. Blood pressure readings were recorded at 09:56hrs on the 19th November and were not recorded again until 21st November at 12:18hrs. When the PEW scores were recorded at 3+,4+ or 6+ and 7+ a blood pressure or capillary refill time was not completed as part of a full set of observation. The last recorded capillary refill time was on the 18th November at 22:02 hrs and was not documented thereafter. Throughout Yusuf's admission in completing the PEW score, the concern box was continuously completed as no concerns. Following the trust guidelines this should include concerns from medical team, nursing team or parental concerns. Parental concerns were ongoing and should have been recorded as such. This would have impacted on the PEWS score outcomes.

The utilisation of PEW scoring within CareFlow vitals and the following of the guidelines for escalation has clearly fallen below the expected standards of care that are laid out by the trust in the use of this system during the period of the 19th November - 21st November at 07:30hrs.

Recommendations

A repeat dissemination of the escalation pathways needs to be undertaken including when and who to escalate concerns, based on individual PEWS scores. It should also promote the necessity to document in nursing and medical notes that a PEW score requiring escalation has occurred, to whom the escalation was reported what were the outcomes of the escalation. Currently the CareFlow vitals system does not allow for documenting that an escalation has occurred and to whom it was reported.

If not already in place the trust needs to implement an audit cycle to monitor the undertaking of observations, as per the recommended frequency by the system.

PEWS Conclusions

The trusts own guidelines and the PEWS guidance for repeating observations and particularly escalation was not followed. There is a discrepancy between the video taken at 01:14am on the 21st November and the PEW score at that was done at 01:04hrs on the 21st November 2022, at this time this discrepancy cannot be explained. When the PEW scores were recorded at 3+,4+ or 6+ and 7+ a blood pressure or capillary refill time was not completed as part of a full set of clinical observations, the parental concerns, which were ongoing, were not recorded as such within the PEW scoring data set. These factors would have impacted on the PEW score generated, potentially providing a more accurate representation of Yusuf's clinical condition.

Nursing documentation did not reflect the PEWS system results and there was no documented evidence that staff took appropriate actions as per the trust guidance on the PEW triggers. This clearly falls below the expected standards of care.

Medicines Administration

In reviewing the medicines administration charts, it is apparent that some 'regular prescriptions' were not able to be administered at the times that were prescribed. In some cases, this was due to loss of venous access However, it is noted that this does not apply to all drug administrations. In some cases, there were several hours discrepancy between the time prescribed and the actual time of administration. This was repeated for several doses.

In the case of intravenous metronidazole, it appears that a dose on the 18th of November was not administered at 20:00hrs as prescribed, but a dose was given at 01:00hrs on the 19th November. However, the next prescribed dose time was at 04:00hrs, not at 01:00hrs. This meant that there was then an actual 12-hour time gap (instead of 8 hours) with the following dose that was administered. It was also noted that on the 20th November the 20:00 hr dose being administered 23:30hrs has only 1 signature for administration.

Oral dexamethasone none of the doses administered were given at the prescribed times. It is unclear if on the 20th November, 2 doses of this drug were given at 20:00hrs. As the dose prescribed at 12:00hrs was documented as administered at 20:00hrs and has only 1 signature for administration, but the dose that was prescribed for 20:00hrs that day is also signed for as being administered.

Oromorph was highlighted by the pharmacist as the frequency of QDS (four times a day) but was prescribed TDS (three times a day). It was prescribed as a regular drug to administered from the 18th of November but not administered until 06:00 hrs 21st November. Before this dose it was documented as '7' omitted at nurse discretion is documented. There was no documentation to describe why the dose was actually administered on the 21stNovember and no evaluation of outcomes/effects documented from the administration, as per the trusts Medicine Management Policy

The paracetamol and ibuprofen were not given at the times prescribed as 'regular prescriptions.'

Discussion

Metronidazole: A dose has been omitted at 20:00hrs on the 18th of November. The following dose was administered, but not at the time prescribed. It is unclear if this was discussed/communicated to the medical team. It is unclear if there was a reason as to why this dose was unable to be administered.

After access was lost on the 20th of November, there was an inability to administer the doses of intravenous antibiotics due at the prescribed times, until venous access re-established. It is unclear if any discussions/communications were had regarding providing an alternative oral or intramuscular (IM) antibiotic cover, until venous access could be re-established. Metronidazole was administered 3.5 hours after the prescribed dose time and Benzylpenicillin was 2 hours after the prescribed dose time. This was an opportunity to review the prescription times and ensure that the times for

administration were clarified moving forward to prevent any risk of confusion with times that intravenous therapy treatment was due.

Oral dexamethasone: This was prescribed at regular time intervals, but none of the doses administered were given at the prescribed times. This prescription should have been discussed with a prescriber and re-written to prevent any potential for confusion and drug administration errors. Communications between the nursing and medical team regarding the administration times would have been beneficial.

Oromorph: It is noted that this was prescribed under 'regular prescriptions,' not 'as required prescriptions.' As a regular prescription this should be administered, as prescribed. To allow for nurse discretion the drug should be prescribed under 'as required prescriptions,' not as a 'regular prescriptions' with regular times for administration. This could be discussed with the prescriber, to establish if 'as required prescriptions' would have been more appropriate than 'required prescriptions.'

This prescription for Oromorph should have been discussed with a prescriber and re prescribed to eliminate the conflicting frequency (QDS)and times daily (TDS). Prescribing under the 'as required prescriptions' would allow for nurse discretion in administration, rather than under the 'regular prescriptions'. In addition, for additional safe practice, brand names should not be used on prescription charts.

Paracetamol and Ibuprofen: these prescriptions were prescribed at fixed times; this did not give staff the ability to be able to administer the doses for when Yusuf potentially would require pain relief. Having such fixed times which were only during the day did not allow for patient centred care and again doses were not administered at the times prescribed. Prescribing under the 'as required prescriptions' would allow for nurse discretion in administration, rather than under the 'regular prescriptions.'

Recommendations

The trust should undertake a review of prescribing practices in the trust.

It is not known at this time if prescribing practice is a part of junior doctor induction programmes, if not, then good prescribing practices and the trust prescribing charts should be included as part of this programme, to encourage best practice when prescribing.

The trust needs to encourage better communications between prescribers and administrators to avoid complications for when the drugs are being administered compared to the times prescribed for administration.

The prescription charts, it was felt, were extremely confusing, due to layout and prescribing practices. Prescription charts could be reviewed for ease of prescribing and reading, but also ability to allow for double signatures for administration. An alternative consideration for electronic prescribing, but it is acknowledged that this may come with its own issues and takes time to implement.

During the interviews with the nurses, it was confirmed that the electronic prescribing is currently being implemented, the nurses report it is much better and clearer for users.

Yorkshire Ambulance Trust Review

Workstream 4

Specialist Review Lead: Anneliese Hillyer-Thake – Independent Investigator & Clinical Reviewer, Nurture Health and Care Ltd

Introduction

1. This report has been developed from a review of a number of key documents, please see the list below.
2. This report has been necessary following the tragic death of Yusuf and the questions his family have been left with post his care from NHS services.
3. This report will only cover the work of Yorkshire Ambulance services all other areas of NHS integration by Yusuf and his family will be considered by other clinical reviewers.
4. It has been necessary for me to review the patient care record completed by the attending Ambulance crew on the afternoon of the 18th November 2022.
5. I have reviewed the Yorkshire Ambulance patient care record in line with required clinical standards set out by the Joint Royal Colleges Ambulance Liaison Committee (JRCALC) Guidelines.

Response to family questions

1. **Did they follow national guidance specifically in relation to the oxygen levels?**
   The JRCALC identifies within the chapter of Medical Emergencies in Children – Ensuring adequate Oxygenation section. That:
   a. adequate oxygenation is essential to all very sick children; administer high concentration oxygen (O2) (refer to oxygen protocol for administration and information) via a non-re-breathing mask, using the stoma in laryngectomee and other neck breathing patients to maintain an oxygen saturation of 95%
   b. high concentration O2 should be administered routinely, whatever the oxygen saturation, in children with sickle cell disease or a history of cardiac disease
   c. if the child is distressed by the presence of a mask, ask the parent to help by holding the mask as close to the face as possible. If this still produces distress, wafting O2 across the face directly from the tubing (with the facemask detached from the tubing) is better than nothing

- The JRCALC Guidance is clear that Oxygen saturation levels for a child should be maintained at 95% or above.

- The guidelines advise that any concentration of oxygen levels in a child below 95% the child should be considered Hypoxic (Hypoxia means 'caused by not enough oxygen being available to the blood and body tissues').
- The patient care record completed at the time of the Ambulance crew attendance to Yusuf. Yusuf is identified by having:
    - 18/11/22 13:18 hrs - Primary Survey on initial arrival with patient: Oxygen level at 91%
    - 18/11/22 14:15 hrs - Last observations taken before arrival at Hospital: Oxygen level at 99%
- This would indicate that Yusuf required supplementary oxygen to assist his breathing.
- The crew have noted in their free text section of the patient care record:
    - Crew put patient on 2 litres of oxygen at 13:20 as saturation levels were 91% on room air.
    - Patient deteriorated back down after being taken off oxygen
    - Crew put patient back on 1 litres of oxygen at 14:44
    - Oxygen now at 99%
- It would be appropriate for the Ambulance crew to have placed a paediatric oxygen mask over Yusuf's face and to supply him supplemental oxygen for the time Yusuf was in the care of the Ambulance crew.
- The supplementary oxygen support to Yusuf's breathing should have been undertaken in line with having a paediatric Pulse Oximeter attached to one of Yusuf's fingers.
    - A pulse oximeter measures your blood oxygen levels and pulse
    - Here is a clear guide to support understanding on the use of Pulse Oximeters, please not the guidance is directed towards adults, as such does not identify the points I raise below. pulse-oximeter-easy-read-2022-digital.pdf
    - Not using the right size Oximeter can affect reading, such as using an adult probe on a small child
    - There is clear research that some skin tones can also cause problems with getting a clear reading
    - It is unclear from the basic evidence provided on the patient care record if any of the above we considered and actioned
    - There was an NHS alert issued by NHS England and Improvement in December 2018 identifying Risk of harm from inappropriate placement of pulse oximeter probes: Patient_Safety_Alert_-_Placement_of_oximetry_probes_FINAL.pdf
- It is clear to me from the evidence provided and the statement on the patient care record that Yusuf required supplementary oxygen support while in the care of the Ambulance crew.

2. **Why there was a delay in him being admitted to Sheffield hospital, despite being informed that Yusuf was on 'high alert'?.**

- Ambulance crews are required to provide emergency care to maintain, save or sustain life
- Their key aim is to ensure that a patient is transported to the nearest available care facility to support the patient medical needs
- The NHS charter is clear that all users of NHS services have a right to choose the location they receive treatment
- Ambulance service work can conflict with this principle on some occasions
- This is due to the nature of the medical emergency the patient is experiencing
- As Ambulance crews have limited drugs and equipment in comparison to the Nurses and Doctors equipment within an Emergency Department, the Ambulance crew are required to:
    - Rapidly evaluate the medical needs of the patient
    - Take action to support, save or sustain life
    - Transport to the nearest available Emergency department for further care
- Some hospitals will provide specialist focus care such as Children's Hospitals, Trauma Hospitals etc. the Ambulance crew are required to consider this as part of their evaluation of the situation, their risk assessment of the harm to the patient if any journey time is extended (where another Emergency Department may be closer to support lifesaving treatment)
- It seems proportionate from the evidence that the Ambulance crew consider removal to the nearest local Emergency department, given the evidence of Yusuf's ability to sustain his oxygen levels and the need for Yusuf to re assessed by a Doctor
- I do not believe it was necessary for the situation to escalate into a difficult conversation

3. **Did the difference of opinion in relation to Yusuf attending Rotherham or Sheffield contribute to the delay in Yusuf's care?**.

- There is no evidence provided that the delay in the Ambulance crew transporting Yusuf to Sheffield Hospital had any impact on his outcome.
- I believe the behaviour and attitude of the crew did not support the required standard expected of NHS staff, NHS Constitution and Health and Care Professional Council (HCPC) conduct
- I further believe the behaviour of the crew had a significant impact of the patient and family experience, in what was clearly already a very stressful situation

Review conclusion

1. From review of the documents including the focused review from Niche, there are some identified areas for improvement in the conduct of the attending Ambulance crew on the date Yusuf was picked up.
2. Following the Niche report the Yorkshire Ambulance Service has undertaken action for service wider development relating to the recommendations from Niche.
3. The Action and Learning document supplied by YAS identified four learning areas which have been implemented as part of the Trust learning, these include:
    - Conflict Resolution and listening to families
    - Clinical Assessment
    - Administration of Oxygen
    - Transport Protocols
4. It is clear that there has been a considerable Emergency Services wide learning programme, identified under the four above points as part of the YAS learning and development form the case.
5. It is evident that the above is valued learning from the concerns raised by the family and from the Niche report findings, however it could be considered that they may not get to all of the concerns raised by the family at the time of the Ambulance attendance.
6. Some key areas considered as part of the overall review of this case should include the following areas. It may be clear to Yorkshire Ambulance Service that these areas have been completed within the above named areas, but the learning for the organisation isn't evident in the following:
    - Current work pressures on crews and how this can impact on the patient's experience of the service, especially when it may be identified that a patient isn't sufficiently unwell to require emergency transport
    - Cultural competence and cultural safety supporting crews to understand the cultural needs of their patients and communities
    - Civility Saves Lives, supporting crews to understand how their initial presentation of attending behaviours and attitudes can have a significant impact on the patient's safety, experience and outcome
    - The patient's right to choose and supporting the patient to understand the right to choose verses emergency medical support priorities and the immediate need for care
    - Bias narrative on handover and how effective, non-bias handover can support the patient to receive the best experience
    - Staff breaks downtime and ability to rest, eat and have a reasonable and important break from calls

7. Any review and learning for any case impacting on the organisation should consider the wider impact of the service and service process, pressures, policies, culture and environment on the outcome of the patient.

Documents reviewed

- Electronic Patient Care Record (EPCR) completed while treating Yusuf 18/11/22
- YAS Action Learning Document YAS ID 30504
- Complaint Letter response to MsT dated 27/01/22
- JRCALC - Guidelines Febrile Illness in Children
- JRCALC - Medical Emergencies in Children

References

- Home | Civility Saves Lives
- Cultural Competence and Cultural Safety - elearning for healthcare
- Why cultural competency is important in healthcare | Skills for Health
- The NHS Constitution for England - GOV.UK
- 32191_Contents v2
- NHS England » Risk of harm from inappropriate placement of pulse oximeter probes

Workstream 6

Specialist Review
Lead: Jackie Furlong, Workforce Analysis. Independent Investigator / Clinical Reviewer

The Expert has been commissioned to examine Yusuf's care and treatment received during his attendance at the Emergency Department at Rotherham Foundation NHS Trust (TRFT) on the 15th and 16th November 2022, and his admission to Sheffield Children's NHS Foundation Trust (SCH) between the 18th and the 23rd November 2022.

Staffing schedules, skill mix, Medical Staffing Rotas and Bed Occupancy were reviewed from:

- Rotherham Emergency Department.
- The Ward, Emergency Department and Intensive Care Unit at Sheffield Children's Hospital.

Rotherham Foundation NHS Trust (TRFT) 15th and 16th November 2022.

Emergency Department.

Paediatric Urgent and Emergency Care Centre (UECC).

Bed occupancy and skill mix documentation was not provided for the review. However, the clinical reviewer was informed that the Band 6 Registered Nurses had emergency Paediatric life support.

Staffing in paediatric UECC – 15 November 2022:

Two Registered Nurses, one of whom was a band 6 who worked the whole shift. The Band 7 team leader worked from 07.00 – 19.30 with some office time in-between. The Band 7 office time was covered by a Band 5 Registered Nurse working 08.30 – 15.00. There was also one additional healthcare support worker (who was also a 3rd year student nurse, now working as a substantive Band 5 in paediatric UECC).

On the night duty there were nine Registered Nurses on duty, two Band 6 and seven Band 5. Five of the Band 5 nurses were agency staff, covering paediatric and adult emergencies.

Staffing in Paediatric UECC – 16 November 2022

On the 16th November 2022 on the day shift, there were two Band 7 Nurses, two Band 6 Nurses, and eight Band 5 Nurses. The two Band 7 Registered Nurses according to the duty rota were on office duties.

Two Registered Nurses were covering Paediatric UECC, of which one was a band 6 with a paediatric life support qualification.

On the night duty there were ten Registered Nurses on duty, three Band 6 and seven Band 5. Four of these were agency staff.

Sheffield Children's NHS Foundation Trust

Emergency Department.

Staff shifts patterns were: 07.00 hours to 20.15 (Day Shift) and 20.00 hours to 07.15 hours (night shift).

On the 18th November 2022 day shift, there were eleven Registered Nurses on duty.

One Band 7 Nurse, a Band 7 Emergency Nurse Practitioner, two Band 6, and seven Band 5, two of which were supernumerary status. There was also one Band 4 Health Care Assistant and three Band 3 Health Care Assistants.

On the night duty there were eight Registered Nurses on duty.

One Band 7, a Band 7 Emergency Nurse Practitioner, two Band 6, four Band 5 and also one band 3 Health Care Assistant.

On the 19th November 2022 day shift, there were Ten Registered Nurses on duty.

One Band 7, a Band 7 Emergency Nurse Practitioner, two Band 6, six Band 5. As well as one Band 4 Health Care Assistant and Three Band 3 Health Care Assistants.

On the night duty there were six Registered Nurses on duty.

One Band 7, two Band 6, three band 5. As well as two Band 3 Health Care Assistants.

On the 20th November 2022, day shift there were ten Registered Nurses on duty.

One Band 7, a Band 7 Emergency Nurse Practitioner, three Band 6, five Band 5. As well as one Band 4 Health Care Assistant and two Band 3 Health Care Assistants.

On the night duty there were seven Registered Nurses on duty,

One Band 7, two Band 6, four band 5, and one band 3 Health Care Assistant.

On the 21st November 2022, day shift there was one Band 7 Nurse, a Band 7 Emergency Nurse Practitioner, three Band 6, five Band 5, and two Band 5 supernumerary status. There was also one Band 4 Health Care Assistant and three Band 3 Health Care Assistants

On the night duty there were six Registered Nurses on duty.

One Band 7, two Band 6, three Band 5, and one Band 3 Health Care Assistant.

On the 22nd November 2022, day shift there were 10 Registered Nurses on duty.

One Band 7, a Band 7 Emergency Nurse Practitioner, three Band 6 and five Band 5 Nurses. As well as two Band 4 Health Care Assistants and two Band 3 Health Care Assistants

The Ward

Staff shifts patterns were: 07.00 hours to 19.30 (Day Shift) and 19.00 hours to 07.30 hours (night shift).

On the 18th November 2022, there was 91% bed occupancy on the day shift and 83% occupancy on the night shift.

Planned staff on the day was five Registered Nurses, and actual staffing was five. Skill mix was two Band 6 registered nurses, three Band 5 registered nurses. Two additional registered nurses were rostered who were not in the numbers (supernumerary). On the day shift there was also a Band 7 registered Nurse on duty, this was highlighted on the off duty as being a management day. In addition to this there were also three Band 3 Health Care Assistants on duty.

With regard to clinical skills, three members of staff were trained to administer intravenous drugs and fluids, four members of staff were Paediatric Life Support competent (PLS) and one member of staff was European Paediatric Life Support competent (EPALS).

On the night shift there were two Band 6 Registered Nurses, three Band 5 Registered Nurses. There was also two Band 3 Health Care Assistants on duty.

With regard to clinical skills, two members of staff were trained to administer intravenous drugs and fluids, two members of staff were Paediatric Life Support competent (PLS), and two members of staff were basic life support trained (BLS).

On the 19th November 2022**,** there was 83% occupancy on the day shift and 79% occupancy on the night shift.

Planned staff on the day was five Registered Nurses, and actual staffing was one Band 6 Registered Nurse and four Band 5 Registered Nurses.

There was also two Band 3 Health Care Assistants on duty.

On the night shift planned staff was four registered nurses, actual staffing was three. This consisted of one Band 6 Registered Nurse, two Band 5 Registered Nurses.

There was also two band 3 Health Care Assistants on duty.

With regard to clinical skills, two members of staff were trained to administer intravenous drugs and fluids, one member of staff was Paediatric Life Support competent (PLS) and three members of staff were basic life support trained (BLS).

On the 20th November 2022, there was 79% occupancy on the day shift and 75% occupancy on the night shift.

Planned staff on the day shift was five registered nurses, actual staffing was four registered nurses. This consisted of one Band 6 registered Nurse and three Band 5 Registered Nurses.

There was also three Band 3 Health Care Assistants on duty.

With regard to clinical skills, two members of staff were trained to administer intravenous drugs and fluids, four members of staff was Paediatric Life Support competent (PLS), and three members of staff were basic life support trained (BLS).

On the night shift planned staff was four registered nurses, and actual staffing was four. This consisted of one Band 6 Registered Nurse, and three Band 5 Registered Nurses.

There was also two Band 3 Health Care Assistants on duty.

With regard to clinical skills, three members of staff were trained to administer intravenous drugs and fluids, one member of staff was Paediatric Life Support competent (PLS), and five members of staff were basic life support trained (BLS).

On the 21st November 2022, there was 75% occupancy on the day shift.

Planned staff on the day was five registered nurses, actual staffing was five registered nurses.

The skill mix was one Band 6 registered nurse, and four Band 5 Registered Nurses. A Band 7 registered nurse on duty was highlighted on the off duty as being on a management day.

There was also three Band 3 Health Care Assistants on duty.

With regard to clinical skills, four members of staff were trained to administer intravenous drugs and fluids, eight members of staff were Paediatric Life Support competent (PLS).

PCCU

Bed occupancy and skill mix was not provided for the review.

On the 21st November 2022 planned staffing on the day shift was thirteen registered nurses, and actual staffing was thirteen registered nurses.

The skill mix was two Band 7 registered nurses, two Band 6 registered nurses, nine Band 5 registered nurses.

With regard to clinical skills, twelve members of staff were trained in the administration of intravenous drugs and fluids, nine members of staff had paediatric life support (PLS). One member of staff had European advanced life support (EPALS), and two members of staff had advanced paediatric life support (APLS).

On the 21st November 2022 planned staffing on the night shift was twelve registered nurses, actual staffing was twelve registered nurses.

The skill mix was two Band 7 registered nurses, two Band 6 registered nurses, eight Band 5 registered nurses.

On the 22nd November 2022, on the day shift planned staffing was twelve registered nurses, actual staffing was eleven registered nurses.

The skill mix was three Band 7 registered nurses, one Band 6 registered nurses, seven Band 5 registered nurses.

With regard to clinical skills, eleven members of staff were trained in the administration of intravenous drugs and fluids, eight members of staff had paediatric life support (PLS). Three members of staff had advanced paediatric life support (APLS).

On the 22nd November 2022 planned staffing on the night shift was thirteen registered nurses, and actual staffing was thirteen registered nurses.

The skill mix was two Band 7 registered nurses, three Band 6 registered nurses, eight Band 5 registered nurses.

With regard to clinical skills, twelve members of staff were trained in the administration of intravenous drugs and fluids, eleven members of staff had paediatric life support (PLS). Two members of staff had advanced paediatric life support (APLS). One member of staff had European advanced life support (EPALS).

On the 23rd November 2022 planned staffing on the day shift was eleven registered nurses, actual staffing was eleven registered nurses.

The skill mix was one Band 7 registered nurses, two Band 6 registered nurses, eight Band 5 registered nurses.

With regard to clinical skills, twelve members of staff were trained in the administration of intravenous drugs and fluids, eleven members of staff had paediatric life support (PLS). One member of staff had advanced paediatric life support (APLS). Two members of staff had Basic Life support (BLS).

Medical Staffing

Week commencing the 14th November 2022

The rota shows that there was a consultant of the week allocated, and an on-call consultant. Two consultants allocated each day over a seven-day period. Two SpRs were allocated Monday to Friday.

The Ward had a two ST4 allocated Monday to Friday. On Saturday and Sunday there were two SpRs on duty.

No rota for PCCU was provided for the review.

Week commencing the 21st November 2022

The rota shows that there was a consultant of the week allocated, and an on-call consultant. There were also consultants allocated each day over a seven-day period. Two SpRs were allocated Monday to Friday.

The Ward had a two ST4 allocated Monday to Friday. On Saturday and Sunday there were two SpRs on duty.

No rota for PCCU was provided for the review.

Conclusion

Rotherham 15th and 16th November 2022.

The reviewer was informed by the trust that the Paediatric emergency department is independent, with its own nursing establishment, unit manager and roster, and is separate from the adult emergency department.

With regard to staffing on the night of the 15th November 2022, nine Registered Nurses, two of whom were Band 6 and seven Band 5. Of the Band 5, two were substantive and five were agency nurses. The reviewer was informed that the department uses agency nurses when needed to keep the department safe. A further review of the agency nurses on duty that night has confirmed that all five worked regularly in the department and were familiar colleagues.

As the review did not include bed occupancy for Rotherham, I am unable to comment on this. With regard to staffing levels, there is no identification on the off duty of who has a Registered Children Qualification.

The Royal College of Paediatricians guidelines (2020) state two Registered Children Nurses per shift.

The reviewer was informed that Colleagues in the UECC from both adult and paediatric nursing have been working together on competencies to enable adult nurses to work with paediatrics.

Paediatric Emergency Nursing level 1 training has commenced for all adult nursing staff in the UECC which provides refresher training for staff on the recognition and management of the sick child in the UECC with a combination of taught sessions, workshops and simulation sessions. Cross working and additional training for the adult team in UECC has taken place to ensure a robust model to support paediatric nursing.

Training has commenced for the some of the children's ward staff to be able to undertake triage so they can support within paediatric UECC.

Sheffield Children's NHS Foundation Trust

With regard to staffing levels, there is no identification on the off duty of who has a Registered Children Qualification.

The Royal College of Paediatricians guidelines (2020) state two Registered Children Nurses per shift.

Ward

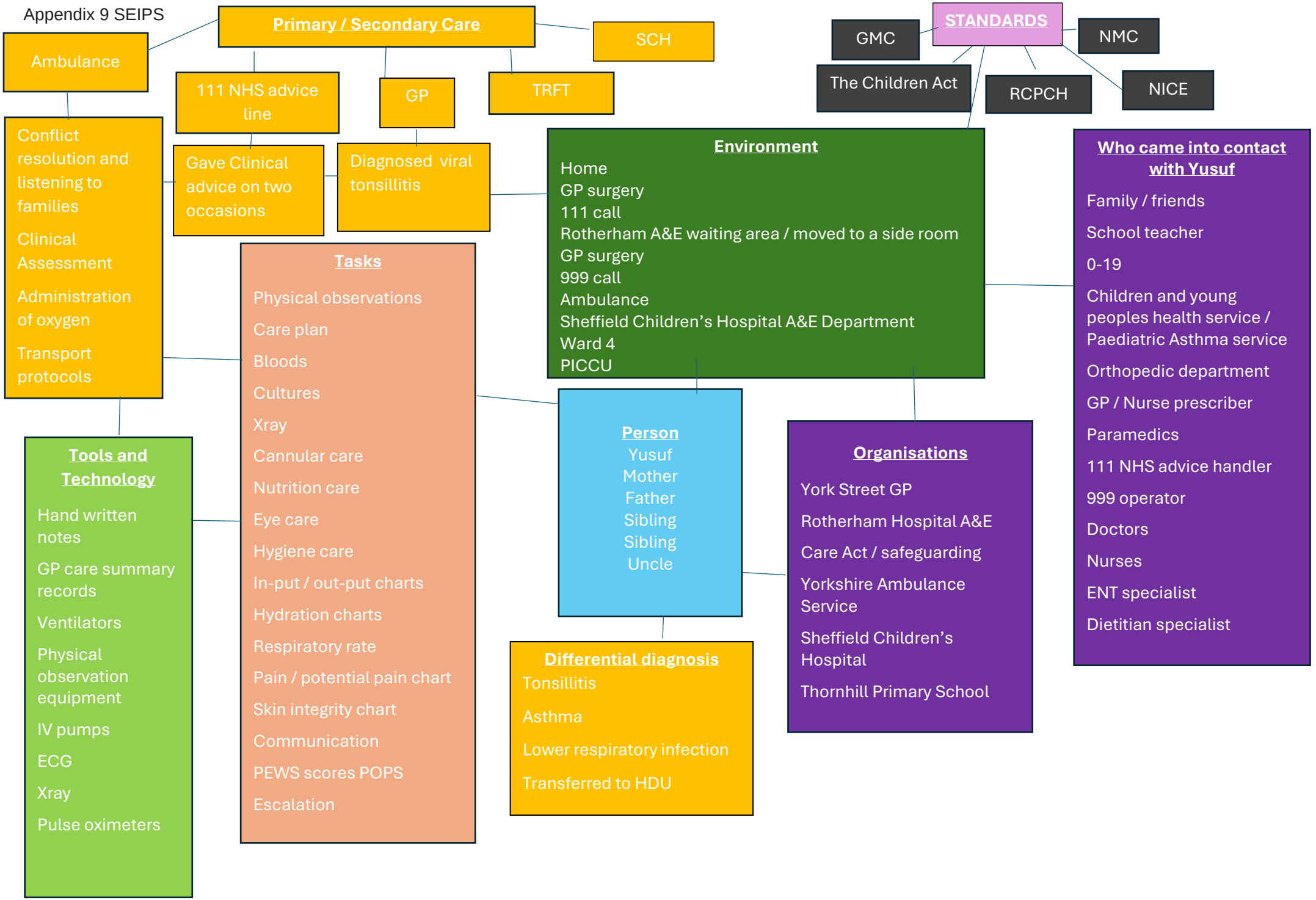
The off duty identifies that there was Band 7 on both day and night duty. With regard to clinical skills there were staff on both days and night who were qualified to administer IV drugs and fluids. There was also evidence that on all shifts staff were qualified to Paediatric life support level.

NURTURE HEALTH & CARE

Interviews and Structured Judgement Reviews (Anonymised)

ED Witness	19th December 2024	Interview
Practice Manager	24th December 2024	Interview
GP	22nd January 2025	Interview
Doctor ED	28th February 2025	Interview
Ward Nurse	10th March 2025	Interview
Ward Nurse	10th March 2025	Interview
Nurse ED	1st April 2025	Interview
ED Ward Manager	1st April 2025	Interview
Health Care Assistant (HCA)	1st April 2025	Interview
Ward Nurse	4th April 2025	Teams Interview
Doctor Consultant	7th April 2025	Interview
Consultant in paediatric critical care	9th April 2025	Interview
Ward Nurse	9th April 2025	Interview
Ward Doctor	9th April 2025	Interview
ST2 On call Doctor (night)	16th April 2025	Telephone interview
ENT Registrar	16th May 2025.	Interview
Day Team: Doctor	20th May 2025	Interview
ST2 On call Doctor (night)	20th May 2025	Interview
The Consultant responsible for Yusuf Nazir on the morning of the 21st November	20th May 2025	Interview
Ward Nurse	22nd May 2025	Statement
Group	25th March 2025	Structured Judgement Review
Group	27th March 2025	Structured Judgement Review
Group	2nd April 2025	Structured Judgement Review
Group	2nd April 2025	Structured Judgement Review

Appendix 9 SEIPS



IMPACT OF NHS WORKFORCE CHANGES ON PATIENT SAFETY AND MORTALITY (2005–2025)

Introduction

Over the past two decades, significant changes in the NHS workforce particularly the composition of clinical roles such as doctors, nurses, healthcare assistants, and advanced practitioners may have had measurable impacts on patient safety and mortality rates. This report synthesises key UK-based research and professional analyses, highlighting trends and implications for clinical practice and policy.

Key Findings

Nurse Staffing and Patient Safety

Multiple studies have consistently found that lower registered nurse (RN) staffing levels correlate with higher patient mortality. For instance, Aiken et al. (2014) reported a 7% increase in patient mortality for every additional patient assigned per RN. Similarly, Ball et al. (2016) observed 20% lower mortality rates in hospitals with lower patient-to-nurse ratios.

Impact of Senior Medical Staffing

Reduced senior medical staff presence, especially consultants, has been linked to poorer patient outcomes. Studies examining the "weekend effect" have suggested that reduced consultant coverage at weekends contributes to higher mortality rates (Culliford & Griffiths, 2023).

Skill Mix and Workforce Substitution

The growth in healthcare assistants (HCAs) and advanced practitioner roles is notable; however, replacing qualified nurses with less qualified staff may negatively impact patient outcomes. Kelly et al. (2023) found that adding healthcare assistants or agency nurses did not significantly reduce mortality, unlike adding qualified RN staff.

Retention of Experienced Staff

High turnover rates among experienced clinical staff significantly correlate with higher patient mortality. Moscelli et al. (2024) indicated that increased turnover among nurses and senior doctors could result in thousands of excess deaths annually.

Fatigue-Related Risk

The investigation identified that that the failure to escalate included care during the night shift, a period commonly associated with increased patient safety risks due to reduced staffing levels, circadian rhythm disruption, and fatigue among healthcare professionals.

The Healthcare Safety Investigation Branch (HSIB) report “The impact of staff fatigue on patient safety” (2022) highlights that fatigue impairs cognitive and physical performance, leading to errors in decision-making, communication lapses, and slower reaction times. This is particularly pronounced in overnight shifts, where staffing is often leaner and support structures are reduced.

Conclusions

The evidence strongly suggests that adequate staffing levels, particularly among qualified nurses and experienced senior medical staff, are critical for patient safety and survival. Workforce retention strategies, balanced skill mixes, and maintaining experienced clinical teams must be prioritised by NHS policymakers to enhance patient outcomes which are a seven day per week, 24/7 service and do not decrease at weekends with consideration given to formal fatigue risk assessments.

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SCH Paediatric and Perinatal Pathology Workforce

Paediatric and Perinatal Pathology is a subspecialty of histopathology recognised by the Royal College of Pathologists. The subspecialty focuses on the diseases and pathogenic mechanisms affecting fetuses, infants and children up to the age of 16 years. Paediatric and Perinatal Pathologists (PPP) undertake both diagnostic work (or 'surgical' work) such as benign or malignant diagnosis from tissue biopsies and post-mortem examination. Most post-mortem examinations undertaken are hospital consented post-mortems (requested by the family). Some PPP (number unknown) also undertake work for the coroner, offering a medical cause of death in children dying suddenly and unexpectedly.

There has been a workforce crisis since the early 2000s, following on from the organ retention scandal. The issues have been further compounded by pathology exposure (or lack thereof) in medical schools and histopathology training posts have been reduced by 18 %. The UK's departure from the European Union has also led to several consultants leaving the NHS. Recruitment from Europe has also been more challenging.

Currently, there are 55 full time equivalent PPP in the UK with 25 unfulfilled posts (31 % vacancy rate). There are also considerable regional disparities with the workforce concentrated in London and the North-West. In many centres PPP work single-handedly and in some regions, there is no pathologist at all.

Some of the workload, particularly the surgical work, has been supported by general pathologists and backlog services. However, the same has not happened in perinatal services and coronial post-mortem examinations. As such, few remaining centres take on perinatal and coronial examinations. Last year at Sheffield Children's Hospital, over 130 coronial post-mortem examinations were undertaken, most of which by one PPP. Many of these cases are not from our region, with some coming from as far as London and Newcastle.

It should be noted that this workforce crisis parallels to the problems faced by anatomical pathology technicians (APTs) with expertise in perinatal and paediatric cases. This limits the capacity of the consultant workforce. APTs are crucial to post-mortem services as they receive and release bodies, undertake technical aspects of the post-mortem, reconstruct the body and run the bereavements suite which includes supporting the family in a truly traumatic time.

After twenty years of recruitment and retention issues, the increased demand for services has not been met with appropriate training and strategy. International recruitment has been the short-term solution with outsourcing and backlog reporting.

Upskilling biomedical scientists for placental examination and digitisation of services have been suggested.

Number of individuals who undertook clinical roles (excludes nursing staff) undertaking an assessment or diagnostic decision, including radiology		
Date / Time	**Professional name**	**Organisation**
15th November 2022 12:36	Nurse Access role	GP
15th November 2022 23:04	EA	111
15th November 2022 23:30	Nurse	TRFT ED
16th November 2022 01:43	Charge Nurse	TRFT ED
16th November 2022 05:33	Doctor	TRFT ED
18th November 2022 08:37 / 11:22	GP	GP ED

18th November 2022 12:59	Emergency care Assistants	Yorkshire Ambulance Service
18th November 2022 14:48	Triage nurse and admitted under a consultant	SCH ED
18th November 2022 14:48	Exam: XR Chest Radiologist	SCH ED
18th November 2022	Medical Admitting Consultant (ST8)	SCH Ward
18th November 2022 21:00	ENT specialist	SCH Ward
19TH November 2022 09:00	ENT specialist	SCH Ward
19TH November 2022 12:15	Consultant	SCH Ward
20th November 2022	ENT specialist	SCH Ward
20th November 2022 12:10	ST6	SCH Ward
21ST November 2022 08:15	Medical review: ST2	SCH Ward
21ST November 2022 09:00	ENT Specialist and SRO	SCH Ward

21ST November 2022 AM	Medical role	SCH
21st November 2022 11:45	Medical review Cons	SCH
21st November 12:10	ENT specialist Consultant	SCH
21st November 2022 9:30	Medica review SRO and clinical fellow (written retrospectively)	SCH Ward
21st November 2022 13:20	PICU Lead Consultant	SCH PICU
21st November 2022	PICU admitting consultant	SCH PICU
21st November 2022 20:48	XR Chest Radiology	SCH PICU
22nd November 2022 11:44	US Neck1 Radiology	SCH PICU
22nd November 2022 13:10	XR Chest Radiology	SCH PICU
23rd November 2022 01:16	XR Chest Radiology	SCH PICU

23rd November 2022 09:17	US Transthoracic echocardiogram	SCH PICU
29th November 2022 07:21	Bereavement follow up	SCH

Sheffield Children's Hospital

Journey to becoming a learning organisation

Post Mortem

As an organisation we want to take every opportunity to learn from events and welcome the learning that we will have from this report and indeed the learning we have already obtained through the process and from which actions have already been put in place, completed and for which we are ensuring that they are embedded.

The following areas were considered:

1. The cause of death recorded on the Medical Certificate of the Cause of Death (MCCD) was - 1a) Type 1 respiratory failure: 1b) Pneumonia; 2) Tonsillitis. This did not fully describe the cause of death.
2. It was agreed that at this stage it will not be possible to clarify the medical cause of death with any more certainty. This is unfortunate in that we cannot provide the certainty that would support the families questions.
3. Had a post mortem been undertaken it would probably have helped to inform a more complete picture of the cause of Yusuf's death.
4. A discussion with a Medical Examiner would also have been helpful in deciding if a MCCD could be issued and the cause identified on it - noting that this role was not in place at the time of Yusuf's death and that Medical Examiners have limited paediatric knowledge.
5. A post mortem can only be obtained at the discretion of the Coroner if it is a death in which the Coroner has a duty to investigate or with the consent of the family.
6. The Coroner was consulted and due to the natural cause of death identified the Coroner did not consider their duty was engaged. This would have been based on the balance of probabilities and have taken into account that concerns had been raised by the family (as noted in the clinical record).
7. The family were also asked but declined a post mortem noting that they would have been approached at a highly traumatic time for them, having just recently watched Yusuf's resuscitation and sadly death. Colleagues would have also been fully aware of the importance of religious and cultural observances at this time.
8. Post mortems.
    a. Consideration was made about whether non-invasive post mortems could be offered (e.g. whole body MRI). Whilst this may provide some additional

information, further research is required to understand how they compare with more traditional methods.

b. Limited post mortems (e.g. of specific body areas) can also be considered.

9. Medical Examiners

a. ME's are independent, senior clinicians who independently review all deaths. Whilst it is not a requirement to consult a ME before a MCCD is issued, it is locally considered good practice.

b. Anecdotally, ME's have been found to be helpful in discussing and concluding a medical cause of death

c. It was recognised that post mortems would usually provide a more robust answer.

10. Bereavement services

a. These have improved significantly in the Trust over the last 2 years with the employment of a senior bereavement nurse and improved systems and processes.

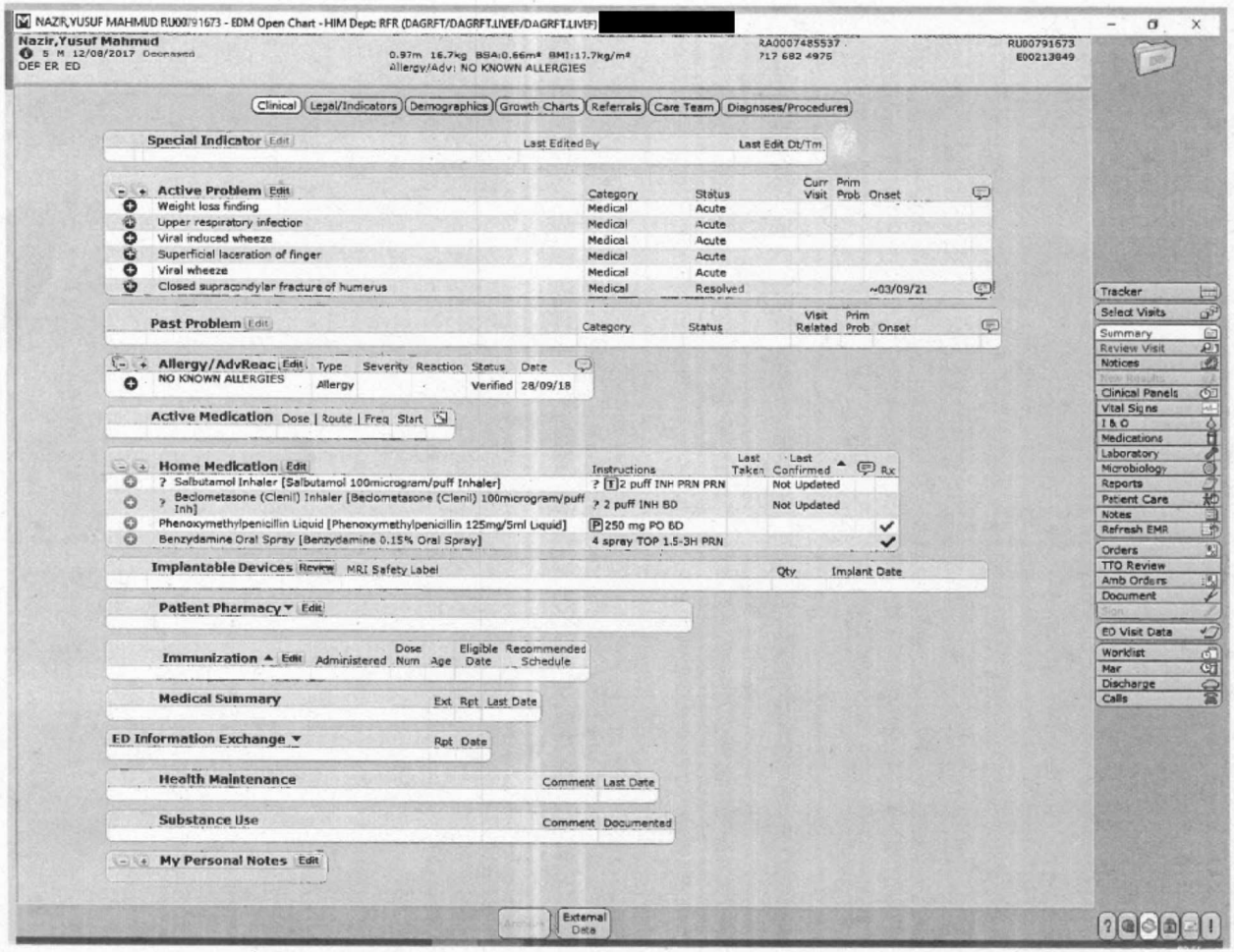
b. Recognising that bereavement is a traumatic time for all concerned, a bereavement pack had already been established for the Paediatric Critical Care Unit. This includes a checklist which has been updated to ensure that asking parents about a post mortem is always considered.

11. The Mortuary

a. The mortuary at Sheffield Children's provides services to both Sheffield and widely beyond due to the scarcity of specialist paediatric pathologists across the country.

b. The mortuary services are based upon the principle that it is the last ward for a child who has died. It is set up to allow conversations with the family to be undertaken and for the family to spend time with their child in a supportive and comfortable environment.

c. Mortuary colleagues log all personal items accompanying a child. These will be returned to the family, noting for example that some families will want items to be washed before returning whilst others would want them returned in their original state. Sensitive discussions with the family are therefore important to ensure that their wishes are identified and followed through.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Nazir,Yusuf Mahmud
5 M 12/08/2017 Deceased
DEP ER ED
0.97m 16.7kg BSA:0.66m² BMI:17.7kg/m²
Allergy/Adv: NO KNOWN ALLERGIES
RA0007485537
717 682 4975
RU00791673
E00213849
Clinical
Legal/Indicators
Demographics
Growth Charts
Referrals
Care Team
Diagnoses/Procedures
Special Indicator Edit
Last Edited By
Last Edit Dt/Tm
Active Problem Edit
Category
Status
Curr Visit
Prim Prob
Onset
Weight loss finding Medical Acute
Upper respiratory infection Medical Acute
Viral induced wheeze Medical Acute
Superficial laceration of finger Medical Acute
Viral wheeze Medical Acute
Closed supracondylar fracture of humerus Medical Resolved ~03/09/21
Past Problem Edit
Category
Status
Visit Related
Prim Prob
Onset
Allergy/AdvReac Edit
Type
Severity
Reaction
Status
Date
NO KNOWN ALLERGIES
Allergy
Verified 28/09/18
Active Medication Dose | Route | Freq Start
Home Medication Edit
Instructions
Last Taken
Last Confirmed
Rx
? Salbutamol Inhaler [Salbutamol 100microgram/puff Inhaler] ? T 2 puff INH PRN PRN Not Updated
? Beclometasone (Clenil) Inhaler [Beclometasone (Clenil) 100microgram/puff Inh] ? 2 puff INH BD Not Updated
Phenoxymethylpenicillin Liquid [Phenoxymethylpenicillin 125mg/5ml Liquid] P 250 mg PO BD
Benzydamine Oral Spray [Benzydamine 0.15% Oral Spray] 4 spray TOP 1.5-3H PRN
Implantable Devices Review MRI Safety Label
Qty
Implant Date
Patient Pharmacy Edit
Immunization Edit
Administered
Dose Num
Age
Eligible Date
Recommended Schedule
Medical Summary
Ext
Rpt
Last Date
ED Information Exchange
Rpt
Date
Health Maintenance
Comment
Last Date
Substance Use
Comment
Documented
My Personal Notes Edit
Tracker
Select Visits
Summary
Review Visit
Notices
Flow Results
Clinical Panels
Vital Signs
I & O
Medications
Laboratory
Microbiology
Reports
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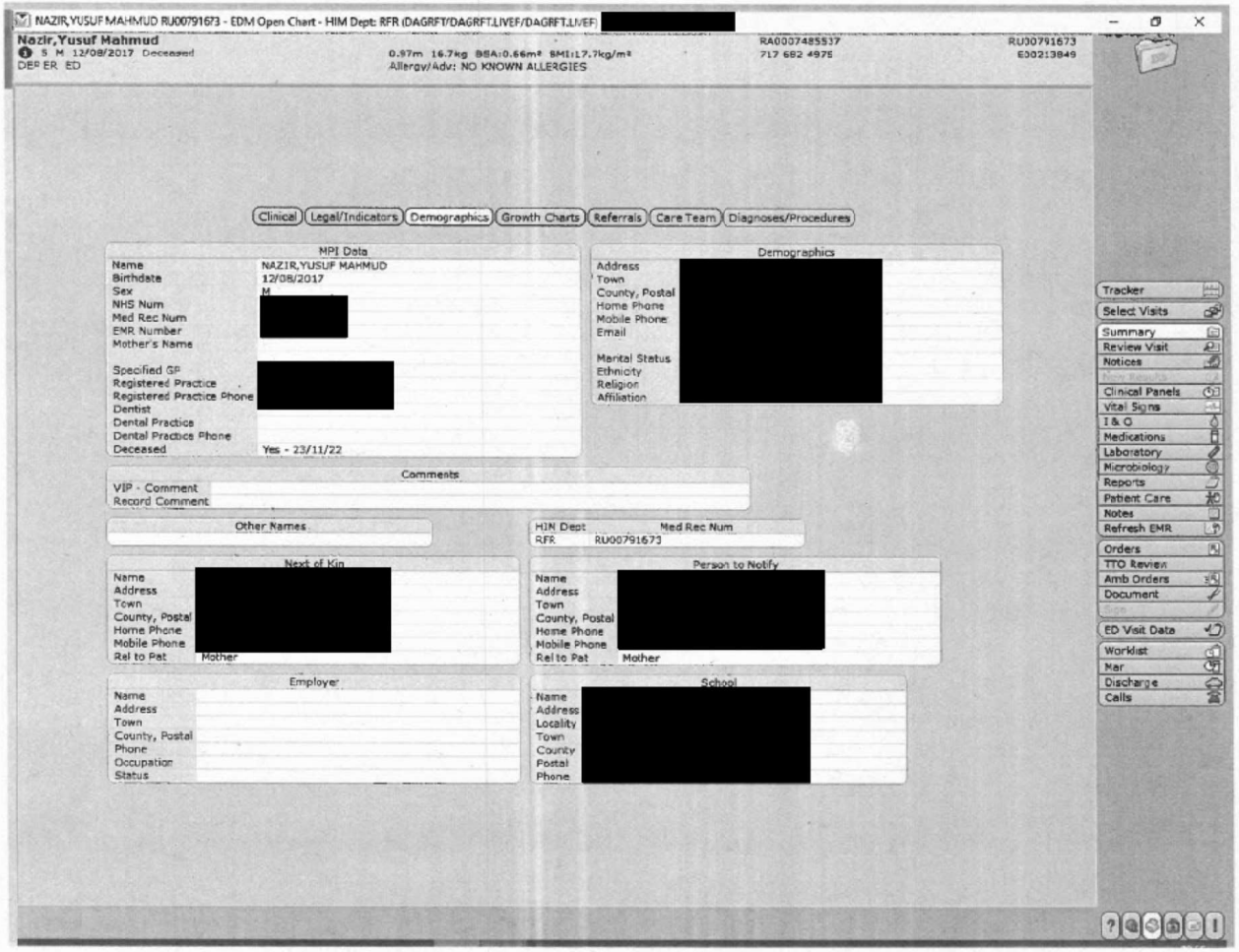
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60021849
Clinical
Legal/Indicators
Demographics
Growth Charts
Referrals
Care Team
Diagnoses/Procedures
MPI Data
Name NAZIR,YUSUF MAHMUD
Birthdate 12/08/2017
Sex M
NHS Num [redacted]
Med Rec Num
EMR Number
Mother's Name
Specified GP
Registered Practice
Registered Practice Phone
Dentist
Dental Practice
Dental Practice Phone
Deceased Yes - 23/11/22
Demographics
Address [redacted]
Town
County, Postal
Home Phone
Mobile Phone
Email
Marital Status
Ethnicity
Religion
Affiliation
Comments
VIP - Comment
Record Comment
Other Names
HIN Dept Med Rec Num
RFR RU00791673
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Rel to Pat Mother
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Home Phone
Mobile Phone
Rel to Pat Mother
Employer
Name
Address
Town
County, Postal
Phone
Occupation
Status
School
Name
Address [redacted]
Locality
Town
County
Postal
Phone
Tracker
Select Visits
Summary
Review Visit
Notices
New Results
Clinical Panels
Vital Signs
I & O
Medications
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Amb Orders
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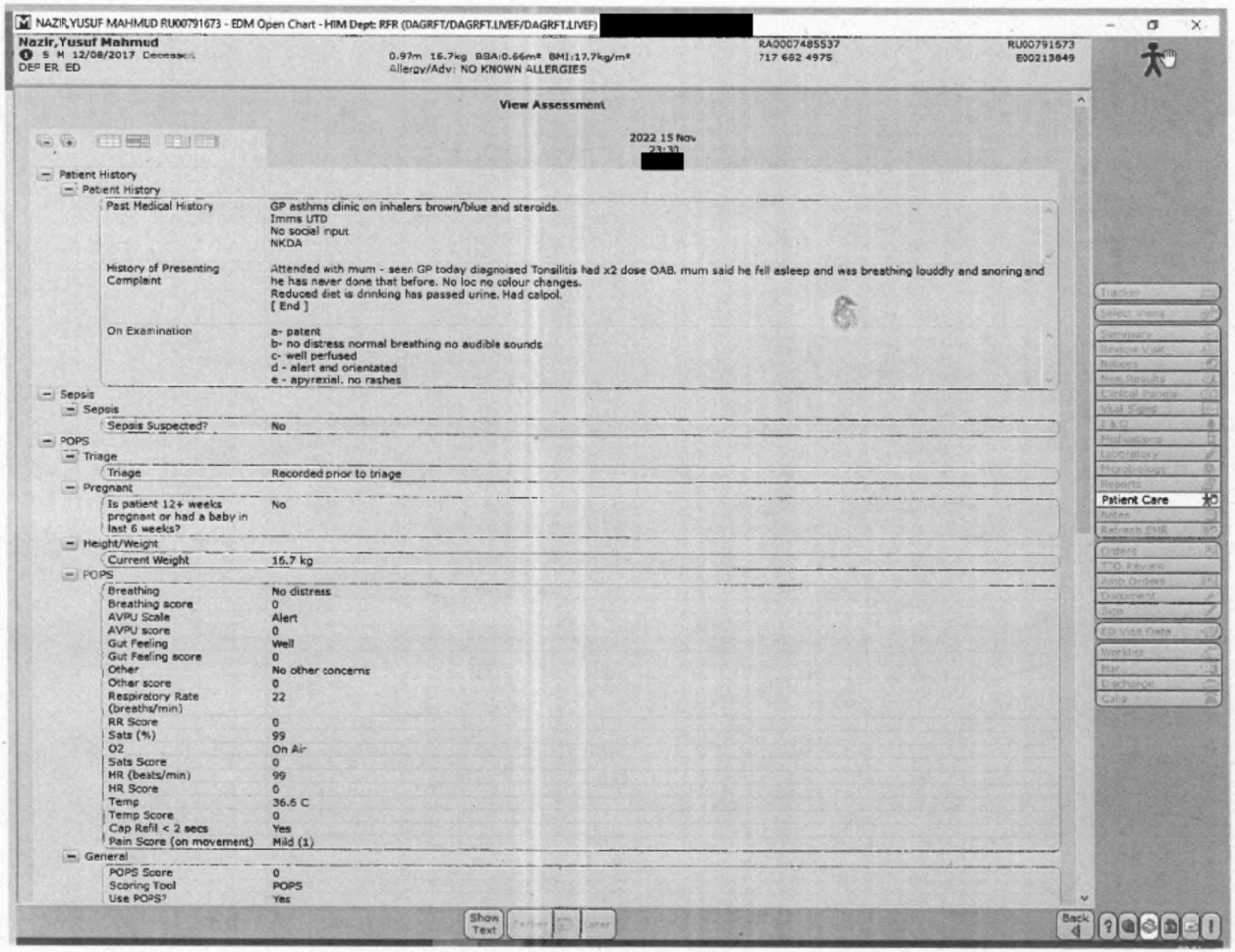
Calls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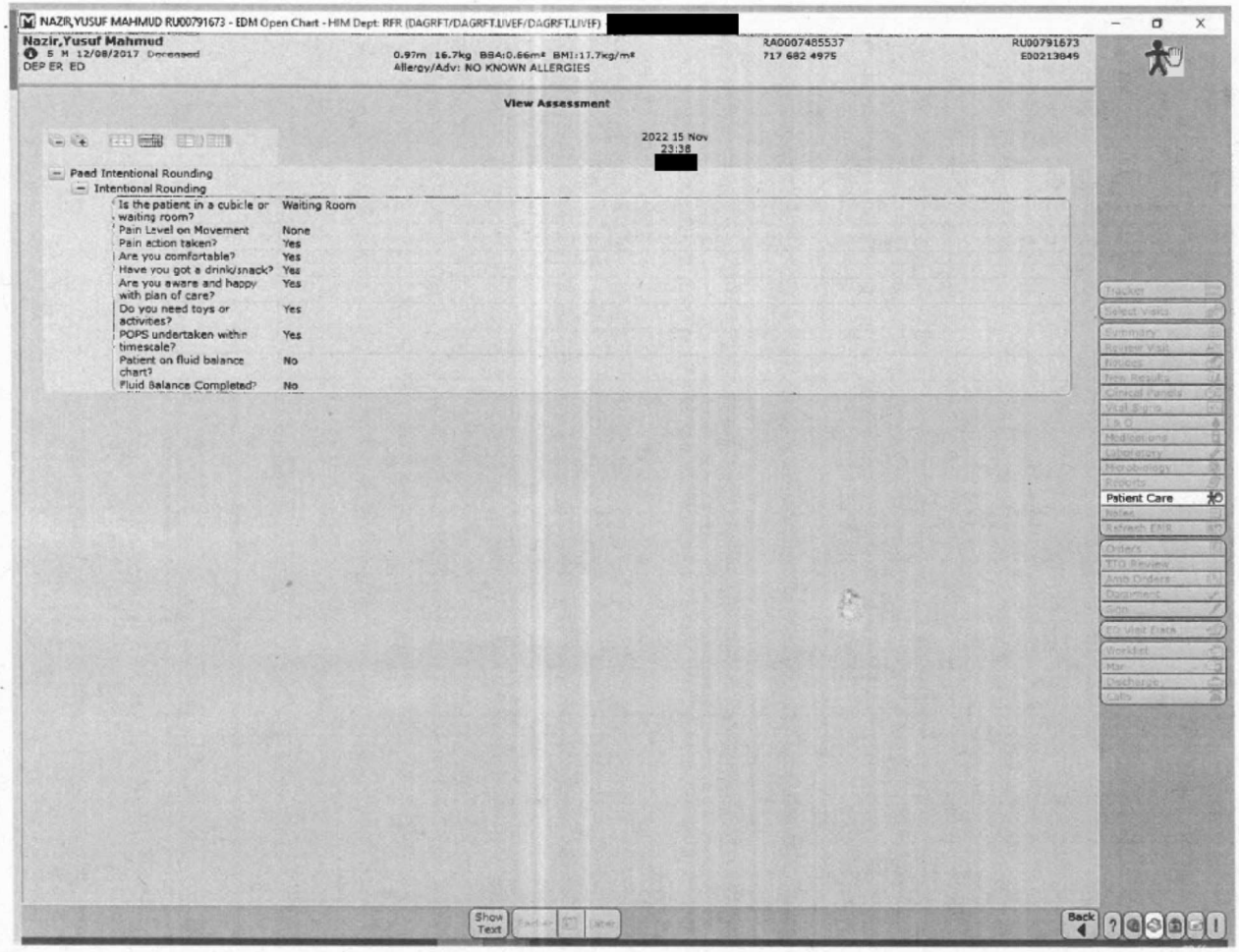
Allergy/Adv: NO KNOWN ALLERGIES
RA0007485537
717 682 4975
RU00791673
E00213849
View Assessment
2022 15 Nov
Patient History
Patient History
Past Medical History
GP asthma clinic on inhalers brown/blue and steroids.
Imms UTD
No social input
NKDA
History of Presenting Complaint
Attended with mum - seen GP today diagnoised Tonsilitis had x2 dose OAB. mum said he fell asleep and was breathing louddly and snoring and he has never done that before. No loc no colour changes.
Reduced diet is drinking has passed urine. Had calpol.
[End]
On Examination
a- patent
b- no distress normal breathing no audible sounds
c- well perfused
d - alert and orientated
e - apyrexial. no rashes
Sepsis
Sepsis
Sepsis Suspected?
No
POPS
Triage
Triage
Recorded prior to triage
Pregnant
Is patient 12+ weeks pregnant or had a baby in last 6 weeks?
No
Height/Weight
Current Weight
16.7 kg
POPS
Breathing
No distress
Breathing score
0
AVPU Scale
Alert
AVPU score
0
Gut Feeling
Well
Gut Feeling score
0
Other
No other concerns
Other score
0
Respiratory Rate (breaths/min)
22
RR Score
0
Sats (%)
99
O2
On Air
Sats Score
0
HR (beats/min)
99
HR Score
0
Temp
36.6 C
Temp Score
0
Cap Refil < 2 secs
Yes
Pain Score (on movement)
Mild (1)
General
POPS Score
0
Scoring Tool
POPS
Use POPS?
Yes
Tracker
Select View
Summary
Review Visit
Notices
New Results
Clinical Panels
Vital Signs
I & O
Medications
Laboratory
Microbiology
Reports
Patient Care
Notes
Refresh EMR
Orders
TTO Review
Amb Orders
Document
Sign
ED Visit Data
Worklist
Map
Discharge
Cols
Show Text
Back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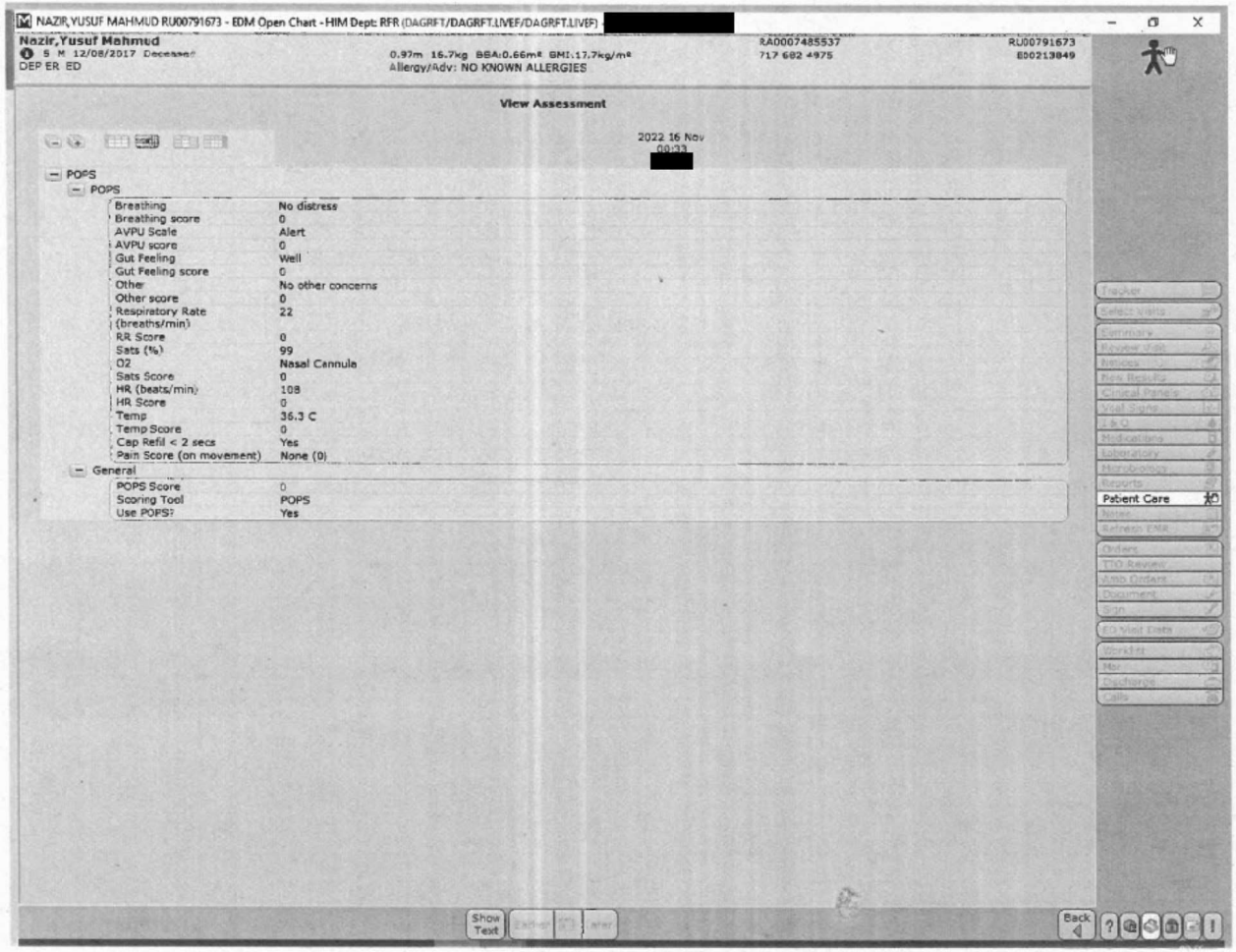
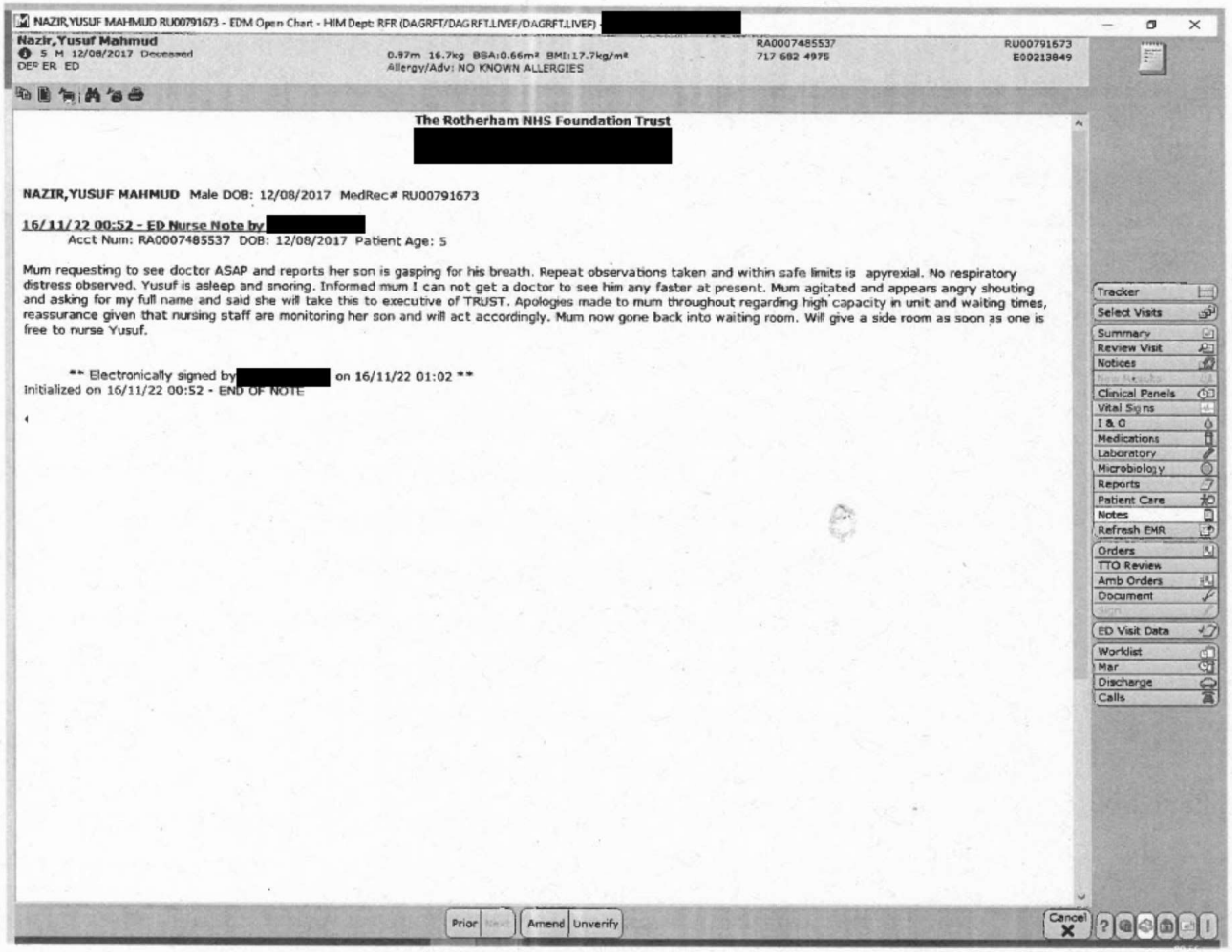
Allergy/Adv: NO KNOWN ALLERGIES
RA0007485537
717 682 4975
RU00791673
E00213849
View Assessment
2022 15 Nov
23:38 [redacted]
Paed Intentional Rounding
Intentional Rounding
Is the patient in a cubicle or waiting room? Waiting Room
Pain Level on Movement None
Pain action taken? Yes
Are you comfortable? Yes
Have you got a drink/snack? Yes
Are you aware and happy with plan of care? Yes
Do you need toys or activities? Yes
POPS undertaken within timescale? Yes
Patient on fluid balance chart? No
Fluid Balance Completed? No
Tracker
Select Visits
Summary
Review Visit
Notes
Tree Results
Clinical Events
Vital Signs
I & O
Medications
Laboratory
Microbiology
Reports
Patient Care
Notes
Refresh EMR
Orders
TTO Review
Anti Orders
Document
Scan
To Visit Date
Worklist
Mar
Discharge
Calls
Show Text
Back


NAZIR,YUSUF MAHMUD RU00791673 - EDM Open Chart - HIM Dept: RFR (DAGRFT/DAGRFT.LIVEF/DAGRFT.LIVEF) -
Nazir,Yusuf Mahmud
S M 12/08/2017 Deceased
DEP ER ED
0.97m 16.7kg BSA:0.66m² BMI:17.7kg/m²
Allergy/Adv: NO KNOWN ALLERGIES
RA0007485537
717 682 4975
RU00791673
B00213849
View Assessment
2022 16 Nov
POPS
POPS
Breathing: No distress
Breathing score: 0
AVPU Scale: Alert
AVPU score: 0
Gut Feeling: Well
Gut Feeling score: 0
Other: No other concerns
Other score: 0
Respiratory Rate (breaths/min): 22
RR Score: 0
Sats (%): 99
O2: Nasal Cannula
Sats Score: 0
HR (beats/min): 108
HR Score: 0
Temp: 36.3 C
Temp Score: 0
Cap Refil < 2 secs: Yes
Pain Score (on movement): None (0)
General
POPS Score: 0
Scoring Tool: POPS
Use POPS?: Yes
Patient Care
Show Text
Back


NAZIR,YUSUF MAHMUD RU00791673 - EDM Open Chart - HIM Dept: RFR (DAGRFT/DAGRFT.LIVEF/DAGRFT.LIVEF) - [redacted]

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RA0007485537
717 682 4975

RU00791673
E00213849

The Rotherham NHS Foundation Trust
[redacted]

NAZIR,YUSUF MAHMUD Male DOB: 12/08/2017 MedRec# RU00791673

16/11/22 00:52 - ED Nurse Note by [redacted]
Acct Num: RA0007485537 DOB: 12/08/2017 Patient Age: 5

Mum requesting to see doctor ASAP and reports her son is gasping for his breath. Repeat observations taken and within safe limits is apyrexial. No respiratory distress observed. Yusuf is asleep and snoring. Informed mum I can not get a doctor to see him any faster at present. Mum agitated and appears angry shouting and asking for my full name and said she will take this to executive of TRUST. Apologies made to mum throughout regarding high capacity in unit and waiting times, reassurance given that nursing staff are monitoring her son and will act accordingly. Mum now gone back into waiting room. Will give a side room as soon as one is free to nurse Yusuf.

** Electronically signed by [redacted] on 16/11/22 01:02 **
Initialized on 16/11/22 00:52 - END OF NOTE

Tracker
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Summary
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Clinical Panels
Vital Signs
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Microbiology
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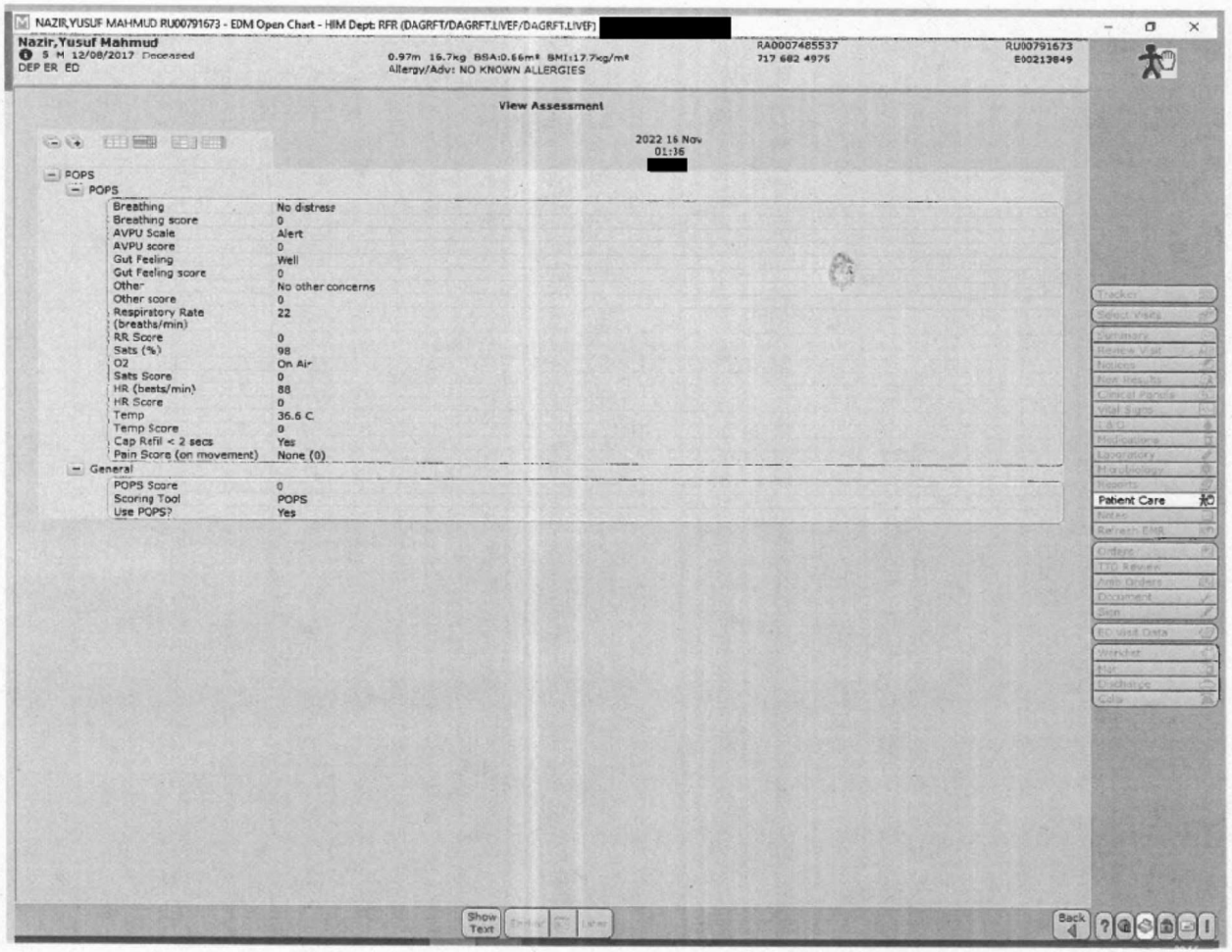
Calls

Prior | Amend | Unverify | Cancel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717 682 4976
RU00791673
E00213849
View Assessment
2022 16 Nov
01:36
POPS
POPS
Breathing: No distress
Breathing score: 0
AVPU Scale: Alert
AVPU score: 0
Gut Feeling: Well
Gut Feeling score: 0
Other: No other concerns
Other score: 0
Respiratory Rate (breaths/min): 22
RR Score: 0
Sats (%): 98
O2: On Air
Sats Score: 0
HR (beats/min): 88
HR Score: 0
Temp: 36.6 C
Temp Score: 0
Cap Refil < 2 secs: Yes
Pain Score (on movement): None (0)
General
POPS Score: 0
Scoring Tool: POPS
Use POPS?: Yes
Tracker
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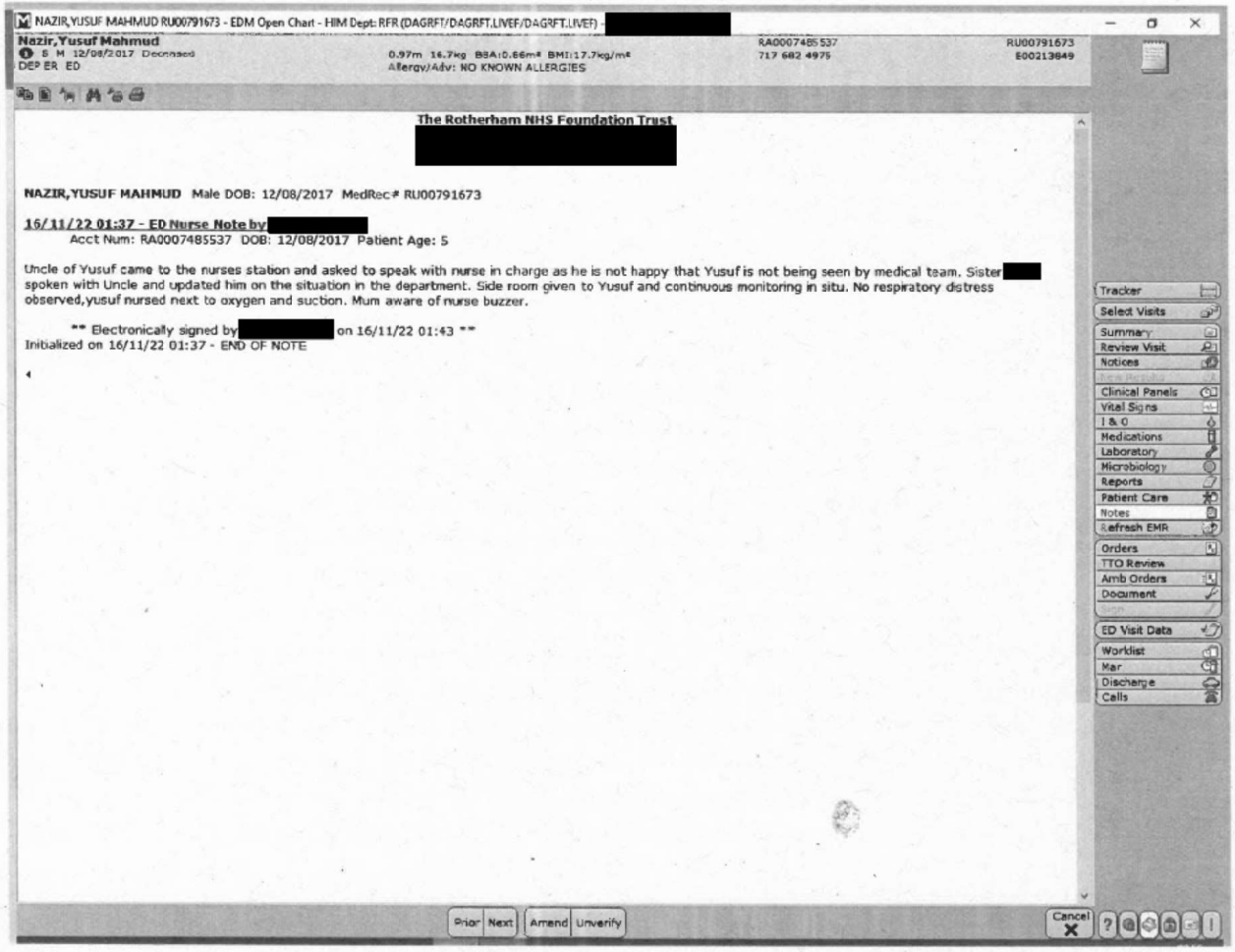
NAZIR,YUSUF MAHMUD RU00791673 - EDM Open Chart - HIM Dept: RFR (DAGRFT/DAGRFT.LIVEF/DAGRFT.LIVEF) - [redacted]

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717 682 4975

RU00791673
E00213849

The Rotherham NHS Foundation Trust
[redacted]

NAZIR,YUSUF MAHMUD Male DOB: 12/08/2017 MedRec# RU00791673

16/11/22 01:37 - ED Nurse Note by [redacted]
Acct Num: RA0007485537 DOB: 12/08/2017 Patient Age: 5

Uncle of Yusuf came to the nurses station and asked to speak with nurse in charge as he is not happy that Yusuf is not being seen by medical team. Sister [redacted] spoken with Uncle and updated him on the situation in the department. Side room given to Yusuf and continuous monitoring in situ. No respiratory distress observed,yusuf nursed next to oxygen and suction. Mum aware of nurse buzzer.

** Electronically signed by [redacted] on 16/11/22 01:43 **
Initialized on 16/11/22 01:37 - END OF NOTE

Tracker
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Vital Signs
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Microbiology
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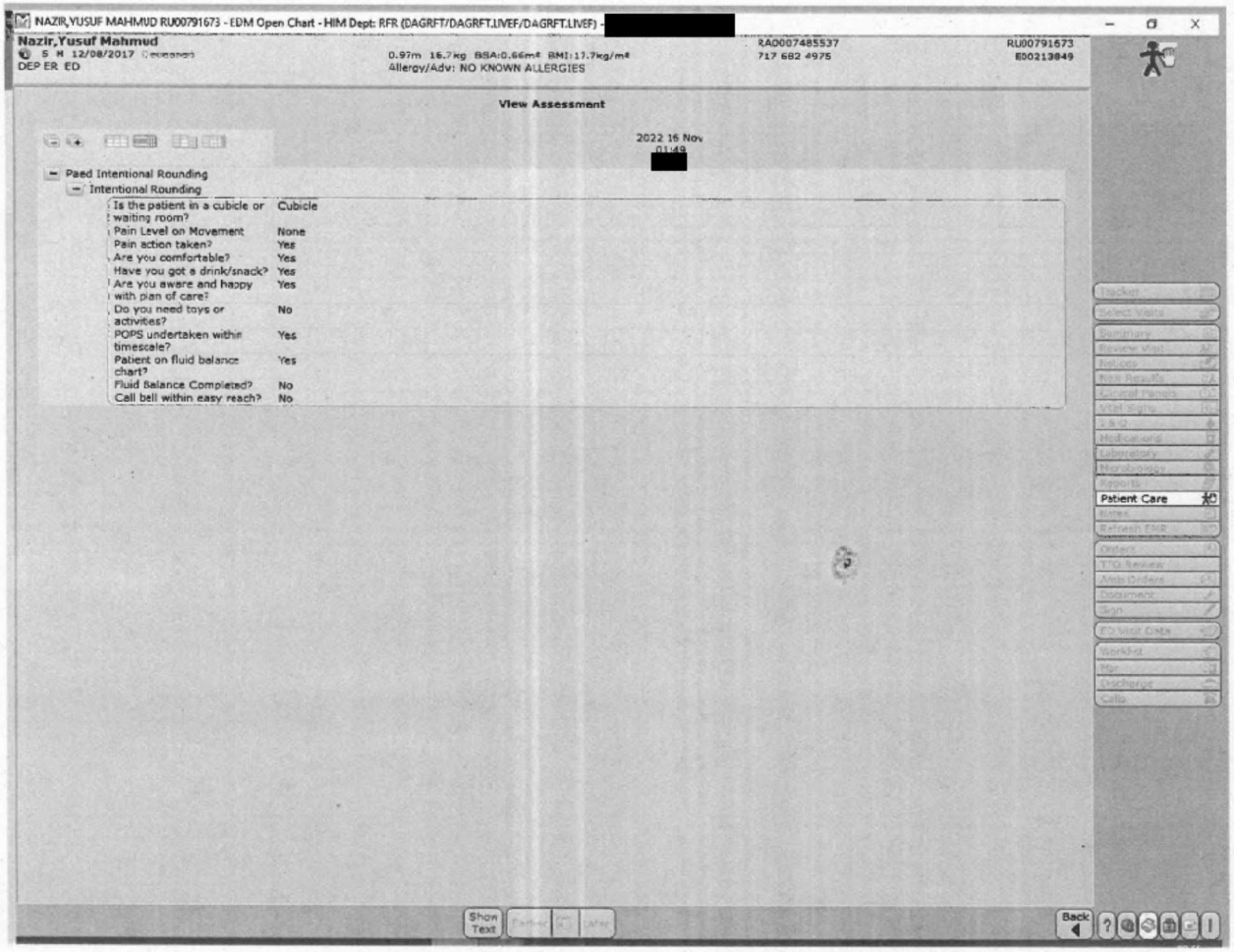
Prior Next Amend Unverify Cancel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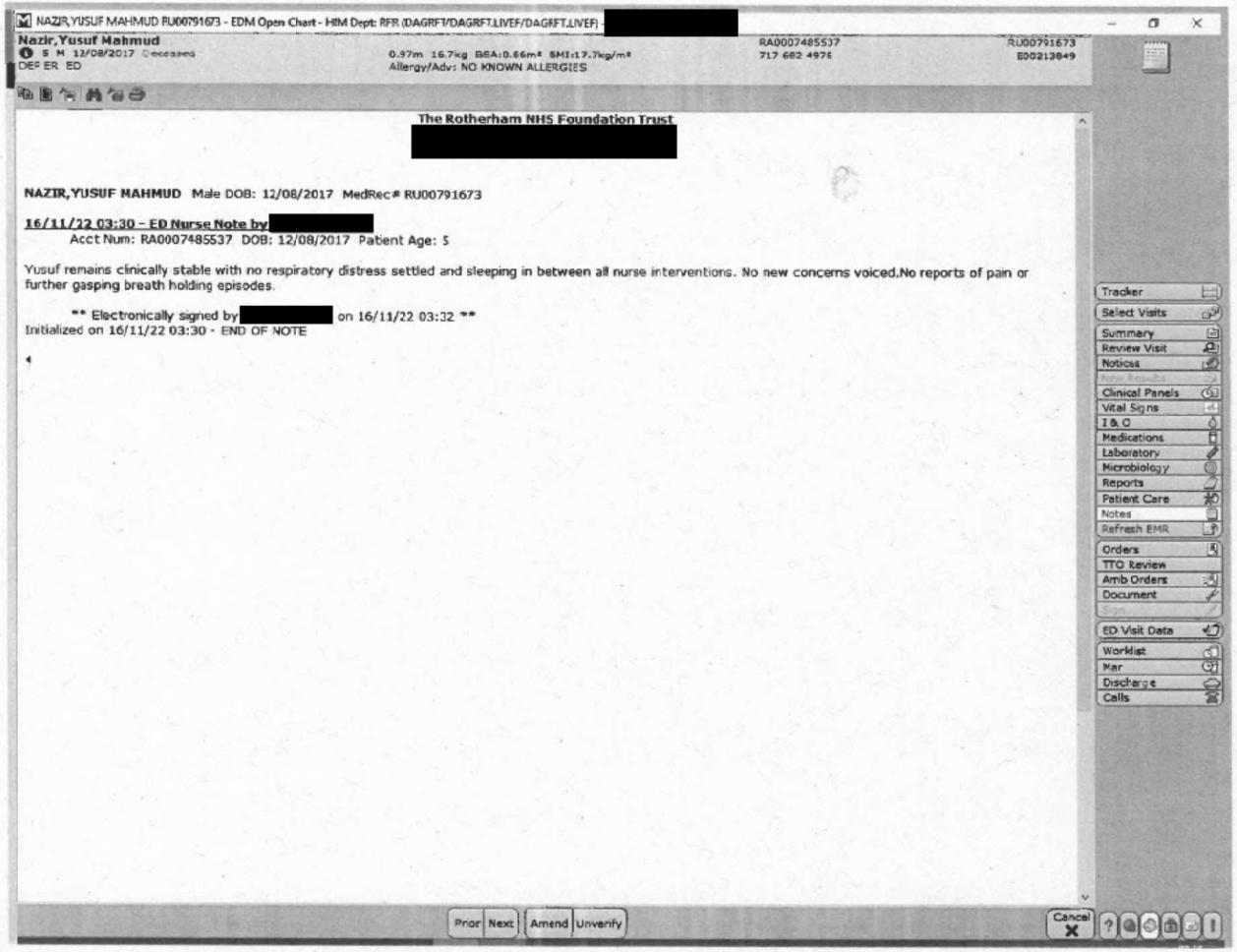
Allergy/Adv: NO KNOWN ALLERGIES
RA0007485537
717 682 4975
RU00791673
E00213849
View Assessment
2022 16 Nov
Paed Intentional Rounding
Intentional Rounding
Is the patient in a cubicle or waiting room? Cubicle
Pain Level on Movement None
Pain action taken? Yes
Are you comfortable? Yes
Have you got a drink/snack? Yes
Are you aware and happy with plan of care? Yes
Do you need toys or activities? No
POPS undertaken within timescale? Yes
Patient on fluid balance chart? Yes
Fluid Balance Completed? No
Call bell within easy reach? No
Patient Care
Show Text
Back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717 682 4976
RU00791673
E00213849
The Rotherham NHS Foundation Trust
[redacted]
NAZIR,YUSUF MAHMUD Male DOB: 12/08/2017 MedRec# RU00791673
16/11/22 03:30 - ED Nurse Note by [redacted]
Acct Num: RA0007485537 DOB: 12/08/2017 Patient Age: 5
Yusuf remains clinically stable with no respiratory distress settled and sleeping in between all nurse interventions. No new concerns voiced.No reports of pain or further gasping breath holding episodes.
** Electronically signed by [redacted] on 16/11/22 03:32 **
Initialized on 16/11/22 03:30 - END OF NOTE
Tracker
Select Visits
Summary
Review Visit
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New Results
Clinical Panels
Vital Signs
I & O
Medications
Laboratory
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S M 12/08/2017 Deceased
DEP ER ED

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Allergy/Adv: NO KNOWN ALLERGIES

RA0007485537
717 682 4976

RU00791673
E00213849

View Assessment

2022 16 Nov
05:14
[redacted]

POPS

POPS

Breathing	No distress
Breathing score	0
AVPU Scale	Alert
AVPU score	0
Gut Feeling	Well
Gut Feeling score	0
Other	No other concerns
Other score	0
Respiratory Rate (breaths/min)	22
RR Score	0
Sats (%)	98
O2	On Air
Sats Score	0
HR (beats/min)	113
HR Score	1
Temp	36.3 C
Temp Score	0
Pain Score (on movement)	None (0)

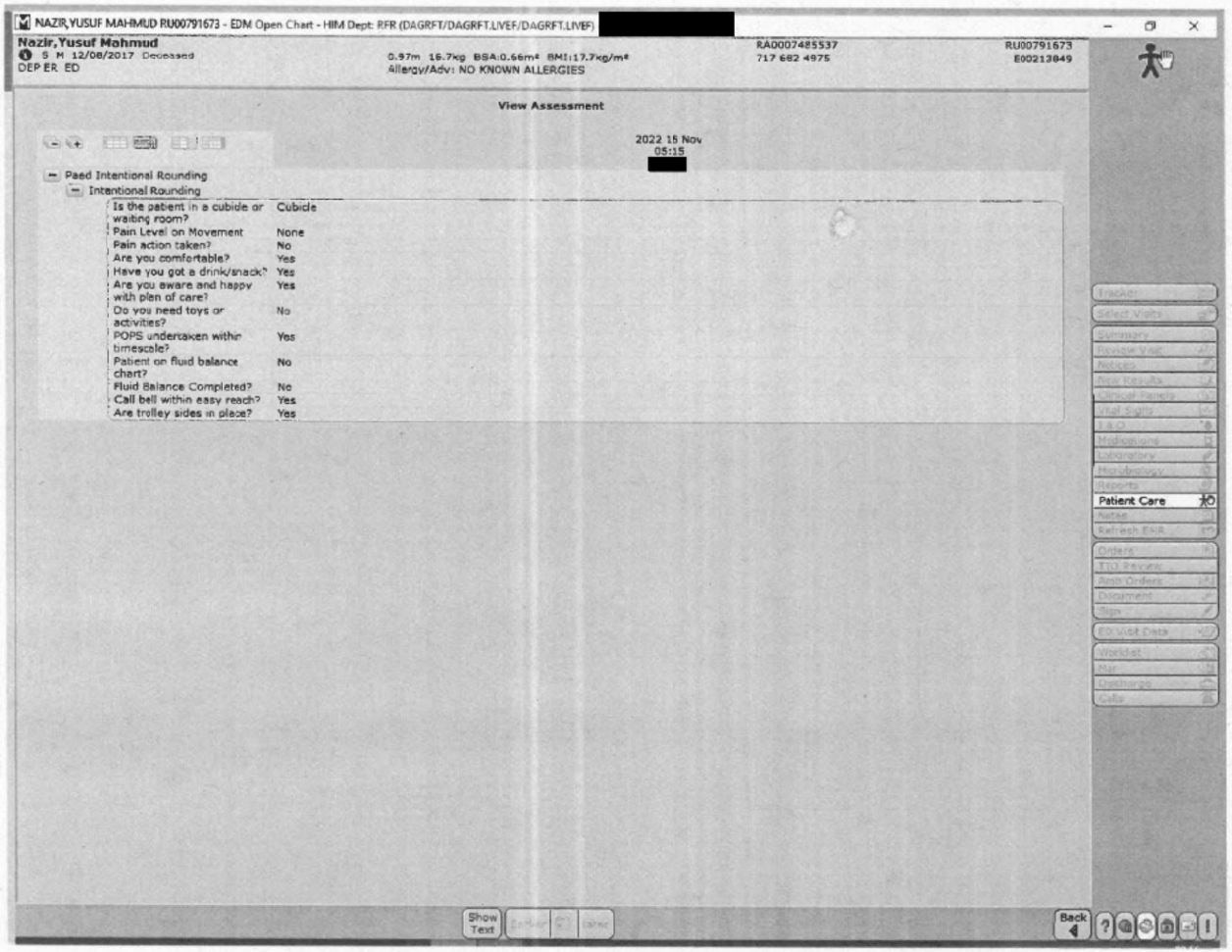
General

POPS Score	1
Scoring Tool	POPS
Use POPS?	Yes

Patient Care

Show Text

Back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717 682 4975
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View Assessment
2022 15 Nov
05:15
Paed Intentional Rounding
Intentional Rounding
Is the patient in a cubicle or waiting room? Cubicle
Pain Level on Movement None
Pain action taken? No
Are you comfortable? Yes
Have you got a drink/snack? Yes
Are you aware and happy with plan of care? Yes
Do you need toys or activities? No
POPS undertaken within timescale? Yes
Patient on fluid balance chart? No
Fluid Balance Completed? No
Call bell within easy reach? Yes
Are trolley sides in place? Yes
TracCare
Select Visits
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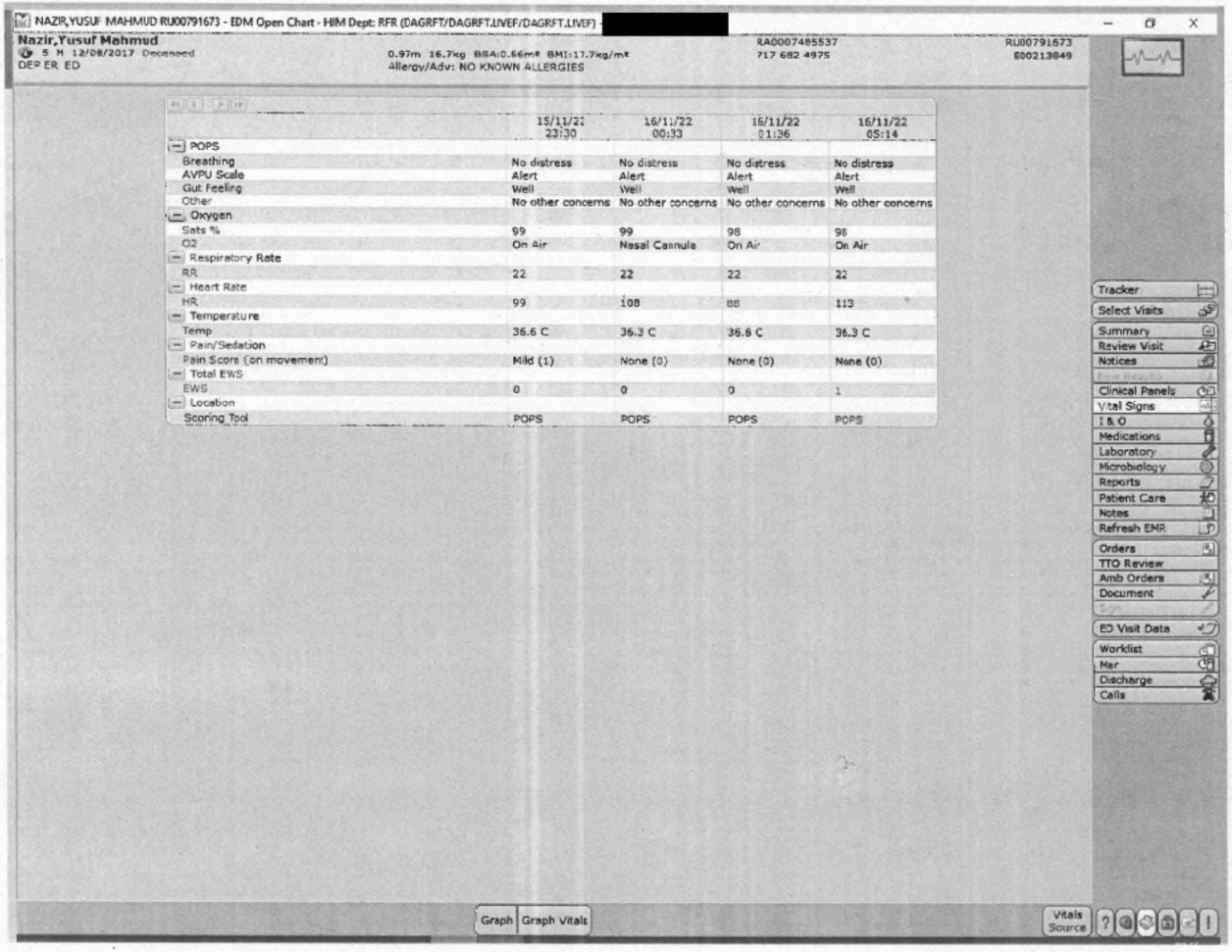
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717 682 4975
RU00791673
E00213849
15/11/22 23:30
16/11/22 00:33
16/11/22 01:36
16/11/22 05:14
POPS
Breathing No distress No distress No distress No distress
AVPU Scale Alert Alert Alert Alert
Gut Feeling Well Well Well Well
Other No other concerns No other concerns No other concerns No other concerns
Oxygen
Sats % 99 99 98 98
O2 On Air Nasal Cannula On Air On Air
Respiratory Rate
RR 22 22 22 22
Heart Rate
HR 99 108 88 113
Temperature
Temp 36.6 C 36.3 C 36.6 C 36.3 C
Pain/Sedation
Pain Score (on movement) Mild (1) None (0) None (0) None (0)
Total EWS
EWS 0 0 0 1
Location
Scoring Tool POPS POPS POPS POPS
Tracker
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Vitals Source

The Rotherham NHS Foundation Trust

[redacted]

NAZIR,YUSUF MAHMUD Male DOB: 12/08/2017 MedRec# RU00791673

16/11/22 05:33 - ED Clinician Note by [redacted]
Acct Num: RA0007485537 DOB: 12/08/2017 Patient Age: 5

ED Clinician Note

- **Notes**
Notes:
P/C:

Tonsillitis diagnosed today in GP started penicillin overnight snorng ? IWOB. Eating little and occasionally drinking regularly small amounts. Fevers. No rash. No headache or neck pain.

PMHx:

Asthma

Meds:
montelukast
clenil
salbutamol

Soc Hx:

seen with mum same address nil social

O/E:

asleep comfortable
spo2 96% consistently during admission, snoring away
no features of respiratory distress
chest clear
H S I + II + 0
abdomen SNT BSP NPM
keriges negative
otoscopy nad
throat large red pustular tonsils and uvula

Treat As:

tonsilitis
reassured re snoring
adv re signs resp distress

Plan:

tto to extend course penicllin- only given 5 days
difflam tto
adv re worrying features to return.

Ix:

Signature:

Clinician Note Complete?: Y

Sepsis Screening

- Sepsis screening
Sepsis Screening Date: 16/11/22
Guidance: To be applied to all Children aged 5-11 years who have a suspected infection or have clinical observations outside normal limits.

- Section 1
EWS: 1

- Actions completed
Sepsis Screening Completed in ED?: Yes

Closing
Date: 16/11/22 Time: 0533

Document Completed By: [redacted]

Job Role: [redacted]

** Electronically signed by [redacted] on 16/11/22 05:36 **
Initialized on 16/11/22 05:33 - END OF NOTE

THESE TERMS OF REFERENCE PROVIDE A HIGH-LEVEL OVERVIEW OF THE INVESTIGATION'S SCOPE, CO-PRODUCED WITH YN'S FAMILY TO ENSURE THEIR VOICES ARE INTEGRAL TO THE PROCESS. A SERIES OF APPENDICES ACCOMPANY THIS DOCUMENT, OFFERING DETAILED METHODOLOGY AND KEY LINES OF INQUIRY. WHILE THESE APPENDICES PROVIDE A DEEPER LAYER OF INFORMATION, THE TERMS OF REFERENCE CAN BE READ INDEPENDENTLY AS A COMPREHENSIVE OUTLINE OF THE INVESTIGATION, MAINTAINING BOTH INTEGRITY AND INCLUSIVITY

NURTURE HEALTH & CARE

NHS England

Independent Investigation into the Care and Treatment of YN

Terms of Reference

Incident ID:	IPSI YN
Date incident occurred:	23/11/2022
Terms of Reference approval date:	02/12/2024
Approved by:	IPSI Governance Group

Distribution/Stakeholder List

Name	Position
Family of YN	Mother, Uncle & Legal Representative
NHSE National Patient Safety Independent Investigation Team (NPSIIT)	Head of NPSIIT
NHSE North East and Yorkshire Regional Team	Regional Director of Nursing & Clinical Quality Director
South Yorkshire Integrated Care Board	Chief Executive
**** Health & Social Care Consulting	Partner
The Rotherham NHS Foundation Trust	Chief Executive
Sheffield's Children's NHS Foundation Trust	Chief Executive
York Road General Practice Surgery	Assistant Practice Manager
Yorkshire Ambulance Service NHS Trust	Chief Executive

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1. Introduction and background

This investigation is commissioned by NHS England in response to concerns raised by the family regarding the care and treatment of YN across multiple clinical settings. YN's family have raised concerns regarding medical treatment and care of YN at Sheffield's Children's NHS Foundation Trust (SCH), The Rotherham NHS Foundation Trust (TRFT) and other organisations involved in his care, namely, Yorkshire Ambulance Service NHS Trust (YAS) and the York Road General Practice surgery (the GP surgery). In addition, concerns pertaining to authority structures influencing decision-making, and the abridged final report published in 2023, that arose from ****'s investigation. This independent investigation is being conducted to address the family concerns and evaluate how parents contributed to decision-making in medical contexts.

2. Scope of the investigation

The investigation has been commissioned to examine YN's;

(1) Care and treatment received during attendance at TRFT Emergency Department on 15 – 16 November 2022.
(2) Care and treatment received during admission at SCH on 18 November – 23 November 2022.
(3) Care and treatment received at the GP surgery on 15 November 2022; and
(4) Care and treatment received by YAS on 18 November 2022.

The scope of this investigation has been identified from the concerns raised directly by the family and from the basis of the Heads of Terms.

The investigation focuses on:

- Medical Care and Interventions: Assessment of interventions for tonsillitis, respiratory complications, and management of vascular access, including issues with the leaking cannula.
- Decision-Making Dynamics: Examination of authority structures and the degree to which family input influenced critical decisions, especially during emergency care.

- Report Transparency: Full review of evidence, addressing family concerns regarding the published abridged final report, from ****'s investigation.

3. Purpose of the Investigation

Key objectives include:

- Identifying actionable lessons for improving family involvement and transparent decision-making processes.
- Establishing whether medical and procedural standards were adhered to throughout YN's care.
- Understanding contexts, including human factors in decision-making to enhance patient-centred approaches

4. Involvement of Patients, Families and Staff

The investigation emphasises the importance of:

Family Engagement: The family's unique insights will inform all phases, with structured consultations and review opportunities.

Staff Involvement: Staff perspectives are essential to identify systemic issues and promote a Just Culture that encourages learning from events.

5. Timescale

The investigation aims for a six-month timeline from initiation to submission of the final report.

6. Methodology

The investigation employs a Structured Judgment Review Method to evaluate decision-making and assess Human Factors. Key workstreams address specific areas of concern raised by YN's family, involving expert-led reviews across multiple aspects of care, communication, and policy adherence.

Each workstream (listed in Appendix 3) is designed to ensure a thorough, evidence-based analysis.

The Clinical Experts: Dr Elizabeth Whittaker - Specialists in infectious diseases, Sara Melville - Paediatric Nurse with expertise in Vascular Access Service. Professor Damian Roland - Consultant in Paediatric Emergency Medicine. These Clinical specialists will be engaged to provide expert analysis of YN's medical care and assess the appropriateness of clinical decisions made. Other clinical specialists will be engaged if the workstream lead deems it necessary.

6.1. Specialist Clinical Reviews:

- **Paediatric Infectious Diseases**: Examines the handling of YN's tonsillitis and the cause of death, involving the GP surgery, YAS responses, and intervention timings at TRFT and SCH.
- **Paediatric Critical Care**: Reviews medication administration, response delays, and staffing adequacy during YN's care.

6.2. Evidence and Communication Reviews:

- **Comprehensive Evidence Review**: Ensures all evidentiary materials are analysed, identifying unused items with rationale documented.
- **Communication Analysis**: Maps the family's interactions and explores the effectiveness of communication at key points in YN's care journey.
- **Cause of Death Communication**: Evaluates the approach for sharing sensitive findings with the family, including procedures for publication of a final report and information release.

6.3. System and Policy Assessments:

- **GP and YAS Policies**: Reviews procedures, such as equipment availability (e.g., pulse oximeters), referral practices, and response protocols.
- **TRFT Staffing and Bed Occupancy**: Assesses adequacy of staffing and resources to understand contributing factors to YN's care quality.

6.4. Specialist Nursing Review:

- **Analyses the management of vascular access**: including the cannula placement, response to family distress, and identification of condition deterioration.

6.5. Policy and Ethical Reviews:

- **PRESSURE Study Review**: Examines inconsistencies about YN's involvement in a research study and adherence to consent protocols.

6.6. Thematic and Risk Analysis:

- **Overarching Thematic Analysis**: Integrates insights from all workstreams to identify key themes, applying SEIPS and Bowtie Analysis for risk and mitigation, as well as Structured Judgment to review decision-making points and family involvement.

Each workstream will document findings, conclusions, and recommendations, ensuring a holistic understanding of care dynamics and areas for improvement.

7. Governance

Role of the Independent Investigation Team:

The Independent Patient Safety Investigation (IPSI) team will be led by Dr Peter Carter (Independent Management Consultant) who will be responsible for overseeing the entire investigation process. Dr Carter will coordinate the activities of the investigation team, ensure that timelines are met, and act as the main point of contact for the family and stakeholders.

The IPSI team will include:

- **Clinical Experts**: Dr Elizabeth Whittaker - Specialists in infectious diseases, Sara Melville - Paediatric Nurse with expertise in Vascular Access Service. Professor Damian Roland - Consultant in Paediatric Emergency Medicine specialist in Paediatric Critical Care Physician and respiratory medicine. These clinical specialists will be engaged to provide expert analysis of YN's medical care and assess the appropriateness of clinical decisions made.
- **Human Factors Experts**: Nurture Health and Care Ltd., (Workstream Leads listed in Appendix 3). These professionals will analyse the decision-making processes, specifically examining the roles of authority structures and the distribution of power during YN's care.
- **Family Liaison Lead**: Shaney-Ann Charles - Nurture Health and Care Ltd., will act as the primary liaison with the family, ensuring their concerns and input are incorporated throughout the investigation.
- **Investigation Operations Lead**: Taymika Brandy - Nurture Health and Care Ltd., will provide project and administrative support to handle project management, logistics, report writing and supporting the Lead in ensuring the smooth operation and delivery of the investigation's objectives.
- **Staff Engagement Lead**: Sarah Griffin - Nurture Health and Care Ltd., will provide support to coordinate and engage staff throughout the investigation.

Role of NHS England:

The NHS England (NHSE) team is the commissioner of the Independent Patient Safety Investigation. NHSE's role will be to:

- Ensure the independence of the investigation by remaining at arm's length during the investigative process. They will not participate in the investigation but will oversee the governance of the process.
- Provide oversight and ensure that all procedural requirements, such as funding, adherence to timelines, and public interest considerations, are met.

- NHSE will also ensure the investigation team complies with established NHS protocols for patient safety, data protection, and transparency.

Governance oversight will be maintained through:

- Regular Oversight Meetings: The IPSI team will hold regular operational meetings with NHSE to provide updates on progress, ensure adherence to the terms of reference, and address any emerging issues. These meetings will be attended by the investigation Lead, NHSE representatives, and other key stakeholders.
- Senior Responsible Officer (SRO): NHSE has appointed an SRO, Dr Aidan Fowler who will act as the escalation point for any issues that require higher-level governance intervention, such as significant delays or concerns about the scope of the investigation.
- Documentation and Reporting: Detailed records of all meetings, communications, and decisions will be maintained to ensure a transparent and accountable governance process.

Escalation of Immediate Patient Safety Concerns:

In the event any immediate patient safety concerns are raised or identified during the inquiry, these will be:

- Escalated immediately to the nominated representative of that organisation (e.g., hospital management or clinical leaders) to address any urgent actions needed to protect patients.
- Escalated directly to the SRO within NHSE to ensure appropriate patient safety measures are enacted as swiftly as possible.
- Documented in real-time to ensure these concerns are captured and produce part of the final report and recommendations.

Communication:

The Communication Cell, that is responsible for all proactive and reactive communication, regarding this investigation, will be led by NHS England National Communications and Engagement Team.

8. Expected outputs

The investigation will produce:

- A comprehensive report will be produced, ensuring factual accuracy and correctness, verified and reviewed by all identified stakeholders, including the family.
- A detailed report with findings and family-centred recommendations.
- Recommendations that align with the CREATED SMART framework to improve transparency and decision-making.

9. Deliverables

A final report will be provided to the family and commissioner. NHS England will be responsible for the further distribution to Stakeholders.

A set of actionable recommendations that follow the CREATED SMART framework for enhancing decision-making and family involvement in care.

~ END~

NURTURE HEALTH & CARE

NHS England

Independent Investigation into the care and Treatment of YN

Appendix 1

THE FAMILY'S AREAS OF CONCERN

Incident ID:	IPSI YN
Date incident occurred:	23/11/2022

The family has raised several critical concerns regarding the care and treatment provided to YN, and they have requested that these areas be thoroughly investigated. These concerns include:

- **** investigation abridged final report: The family is particularly concerned by the abridged final report published 2023. They feel that key information has been withheld or altered, and they are seeking assurance that all evidence provided is reviewed as part of the investigation.
- Communication and Involvement in Decision-Making: The family has expressed concerns about a lack of clear communication from medical professionals and insufficient involvement in critical decisions regarding YN's care. They are requesting an investigation into how their input was considered and whether their voices were adequately heard.
- Medical Interventions and Care Quality: The family wishes to explore the appropriateness of the medical interventions and treatments provided from YN's initial GP appointment on 15 November 2022, up until his death on 23 November 2022. The family have also requested further investigation into the reported issues with YN's leaking and positional cannula. They seek clarity on whether these complications were properly addressed and whether the care provided met the expected standards.

The family has requested that the following key lines of enquiry be pursued as part of the investigation:

The family are of the view that the report should address their ongoing concerns regarding the analysis of all available evidence, particularly around YN's admission to both hospitals. The family feel that the entirety of evidential sources were not explored, including the evidence collated by the family and any available CCTV evidence, which could have offered a contrasting viewpoint or an alternative perspective on the events. All relevant evidence should be analysed and reviewed by the clinical experts involved in the investigation.

1. The family have raised concerns regarding the review process pertaining to any recommendations made as a result of the **** investigation. All recommendations for the IPSI, where possible should be clearly linked to the findings of the report.

2. Any opportunities for learning or failures that may be identified as a result of the investigation should explore 'why' any failings occurred, rather than stating simply that the failures had arose. The family would be reassured if this was addressed within the final investigation report to ensure transparency and accountability.

3. The family have concerns regarding the following four organisations/clinical staff involved in the care of YN leading up to his death, namely, the York Road General Practice Surgery (the GP surgery), Yorkshire Ambulance Service NHS Trust (YAS), The Rotherham NHS Foundation Trust (TRFT) and Sheffield Children's NHS Foundation Trust (SCH). The nature of the concerns are as follows:

3.1. The GP Surgery:

Concerns regarding the absence of an Oximeter at the GP Surgery where YN had been seen prior to his attendance at TRFT. Further, the appropriacy of YN being seen by a Nurse rather than a GP. In addition, whether the GP had been able/permitted to refer YN to TRFT.

3.2. YAS:

The family are of the view that the calls made to 999 and 111 include important evidence regarding YN's consistent health concerns and presentation. In addition, the outcome letter of the independent complaint raised by the family to YAS should also be taken into consideration. The family report that recordings of these calls are available for review. Further, the family raised concerns regarding YN's oxygen levels at the material time and why there was a delay in him being admitted to SCH. The family also raised whether the debate

regarding the suitability of YN attending TRFT or SCH contributed to the delay in YN's care.

3.3. TRFT:

With regard to YN's attendance at TRFT, the family are of the view that CCTV evidence should be reviewed and that the two members of the public identified by the family should be interviewed as part of the new investigation. The new investigation should also take into consideration the care and treatment YN received in TRFT (Emergency Department) ED, including the level of clinical monitoring/frequency of physical observations and what effect earlier administration of IV antibiotics at TRFT may have contributed to YN's outcome. Further, the staffing levels at the time of YN's attendance in ED, bed occupancy and how long YN had spent in ED. The family also raised concerns about the relevance of the **** report including details of family members' alleged presentation whilst attempting to get YN admitted to the hospital.

3.4. SCH:

The family would like more consideration/investigation into the overdose of medication which they had been informed of and whether the overdose would have made a difference to YN's reported sugar levels and infection levels. The family would also like to explore whether this overdose had placed YN at a higher risk of harm or impacted his chances of survival. Further, the family remain concerned that the overdose was stated to be an 'early dose' in ****'s report.

YN's mother also explained that a Dr had interacted with her during the early hours of Monday morning on 21 November 2022, explaining that YN was fine, despite what she felt was a clear deterioration in his health and breathing. This Dr was not identified by the authors of the **** investigation. The family are also concerned that this opinion was inconsistent with the medical opinion they had received later that morning where another Dr had raised concerns about the deterioration of YN's health.

The family note that there was a delay in reviewing YN's x-rays from 18 November to 21 November 2022 of his chest. The family were aware that a scan was also taken of YN's throat on Tuesday, 22 November 2022. The family raise concerns as to whether an immediate review of these x-rays would have shown the severity of YN's condition and given rise to medical intervention prior to Monday, 21 November 2022, thus preventing YN's outcome. The family expressed concerns regarding the continuity of YN's care including the lack YN's oxygen level monitoring and would like the investigation to explore the missed opportunities in identifying the severity of YN's tonsillitis.

The family remain concerned that YN was not seen by a Paediatric Consultant during this time. In this regard, the family expressed concerns regarding the availability of specialist staff and the level of experience of staff present in the SCH at the material time. The family remained concerned about YN's leaking cannula, which YN's mother had raised to the nurse on duty at the time.

The family also raised issues that are pertinent to the events following YN's death, these are identified as the following:

4. **PRESSURE Study:**

The family were informed that YN had been the subject of a PRESSURE study. The family reported that YN's participation in this study was raised to them following his death and that the hospital accepted they had not informed YN's family at the time. The family state that they were not asked for their consent for YN to participate in this study. However, SCH asked them to provide retrospective consent via a form sent to the family, after his death in a letter dated 14 July 2023. The family remain concerned about the inconsistent information it had received regarding YN's participation in the study and seek clarification in this regard.

5. **YN's cause of death/ Postmortem:**

The family remains deeply concerned about the conflicting information they received regarding YN's cause of death. Initially, they were told that YN had died due to the following:

1a) Type 1 respiratory failure

1b) Pneumonia

2) Tonsillitis

This explanation provided the family with clarity, and they were assured of YN's cause of death. As a result, the family did not feel the need for a post-mortem, as they were confident in the cause of death. They also wish to clarify that their decision not to request a post-mortem had nothing to do with cultural reasons. However, when the **** report explored other possibilities that may have contributed to YN's death, it left the family re-traumatised and confused as to the relevance of this further exploration.

~ END~

NURTURE HEALTH & CARE

NHS England

Independent Investigation into the Care and Treatment of YN

Appendix 2

KEY LINES OF ENQUIRES TO INFORM THE TERMS OF REFERENCE

Incident ID:	IPSI YN
Date incident occurred:	23/11/2022

The family has requested that the following key lines of enquiry be pursued as part of the investigation:

- The family believe that the entirety of evidential sources was not explored, which could have offered a contrasting viewpoint or an alternative perspective on the events. All available evidence should be analysed and reviewed by all clinical experts involved in the investigation.
- Identify the unexplored materials identified by the family and ensure that this material is considered in the appropriate workstreams or where remains unused, the rationale for this is written.
- The wider stakeholder feedback included that the impact on staff should be considered and that their perspective forms part of the Key Lines of Enquiry, for this investigation.
- The family have concerns regarding the following four organisations/clinical staff involved in the care of YN, leading up to his death, namely, York Road General Practice Surgery (the GP Surgery), Yorkshire Ambulance Service NHS Trust (YAS), The Rotherham NHS Foundation Trust (TRFT) and Sheffield Children's NHS Foundation Trust (SCH). The nature of the concerns are as follows:

The primary questions to be answered:

1. **Were there missed opportunities in identifying:**

   a) the severity of YN's tonsillitis and condition

   b) differential diagnosis to prevent YN's subsequent death?

GP Surgery:

Questions posed in relation to the GP Surgery:

1. Why was there no pulse oximeter? And, what checks and procedures were in place to ensure that the equipment in functional?
2. Was the GP able to refer directly to TRFT paediatric ward?
3. Did the primary care service respond in line with national guidance regarding YN's presentation?

YAS:

Questions posed in relation to YAS:

1. Did YAS respond in line with national guidance in relation to their growing concerns for YN's health, this included specifically considering YN's oxygen saturation?
2. Why there was a delay in YN being admitted to SCH?
3. Did the difference of opinion in relation to YN attending TRFT and SCH contribute to the delay in YN's care.

TRFT:

Questions posed by the family in relation to TRFT:

1. What were the staffing levels of the Emergency Department (ED) at the time YN was being assessed. This includes what skill mix was present, i.e. what band or grade of staff were on duty and has there been any improvement in the ratio of appropriately trained staff in response to the **** report recommendations.
2. What was the bed occupancy of the paediatric ward both at the time YN was being assessed and at the time YN's uncle had called the Hospital (Friday 18 November 2022)?
3. What was the length of stay in ED?

4. Is there any clinical evidence to suggest that YN's earlier admission to TRFT for IV antibiotics, would have possibly prevented YN's death?
5. Was prescribing YN additional oral antibiotics the most appropriate form of medication, given his presentation reported by his mother (unable to eat, drink or swallow) and that he had already been prescribed antibiotics by the GP surgery?

SCH:

Questions posed in relation to SCH:

1. Was there an overdose of medication and if so, what was the medication? If an overdose occurred, what was the possible consequences to YN?
2. Did the overdose impact on the blood sugar levels of YN?
3. Was the overdose a contributing factor to YN death?
4. Did the medical team respond to the concerns that YN's mother had including the inconsistencies of medical opinion during his admission at the hospital? Why did this occur?
5. Why was there a delay in reviewing YN's X-ray? Did this delay contribute to YN's outcome and provision of treatment?
6. Was there consultant paediatric cover on the weekend in question? If yes, what was their involvement in this case? If no, did this fall below the level of staffing expected?
7. What were the staffing levels of the on the Paediatric ward at the time YN was being assessed? This includes what skill mix was present, i.e. what band or grade of staff were on duty.
8. The cannula was reported to be leaking by YN's mother leaking, was the cannula sited correctly? Was the cannula patent? Should the cannula have been replaced?
9. The nurse on duty over this weekend was perceived not to respond to the distress that the family were experiencing, respond to their requests for help or identify that YN condition had worsened over the weekend, including low

oxygen levels and YN reporting stomach pains. Why was this? Would earlier medical intervention affected YN's outcome?

The family also raised issues that are pertinent to the events following YN's death, these are identified as the following:

PRESSURE Study:

There is lack of consistency about whether YN was in the subject of a PRESSURE study. If YN was a participant in the study, why was the policy in relation to research and consent not followed? If not, why were the family informed about YN's participation in this study.

YN's cause of death/ Postmortem:

The death certificate states Cause of Death

1a) Type 1 respiratory failure

1b) Pneumonia

2) Tonsillitis

Is this the correct cause of death of YN?

Management of the communication related to the difference of opinion that has arisen in relation to the cause of death.

Ensure new information is shared with the family prior to the release of the report to ensure that they understand the nature of this new information.

~ END~

NURTURE HEALTH & CARE

NHS England

Independent Investigation into the Care and Treatment of YN

Appendix 3

METHODOLOGY - INVESTIGATION WORKSTREAMS

Incident ID:	IPSI YN
Date incident occurred:	23/11/2022

The IPSI has identified the following workstreams to review all the questions the family have asked. Throughout the investigation, further experts will be identified by the workstream leads, if required, such as a GP and Emergency Medicine Consultant.

Workstream 1

Specialist Review

Lead: Dr Elizabeth Whittaker - Paediatric infectious disease specialist
Professor Damian Roland - Consultant in Paediatric Emergency Medicine

- Were there missed opportunities in identifying the severity of YN's tonsillitis and preventing YN's subsequent death?
- What was the cause of death of YN?
- Is the death certificate correct?

In addition, the specialist review will include the following:

York Road General Practice Surgery:

Did the primary care service respond in line with national guidance in relation to their growing concerns for YN health?

Yorkshire Ambulance Service NHS Trust (YAS):

Did YAS respond in line with national guidance in relation to their growing concerns for YN health, this included specifically considering YNs oxygen saturations?

The Rotherham Hospital NHS Foundation Trust (TRFT):

Is there any clinical evidence to suggest that YN's earlier admission to TRFT for IV antibiotics, would have possibly prevented YN's death?

What was the length of stay in ED and whether this was a contributing factor to the death of YN?

Sheffield Children's NHS Foundation Trust (SCH):

Would timely intervention over the weekend have possibly prevented YN's death?

The death certificate states Cause of Death:

1a) Type 1 respiratory failure

1b) Pneumonia

2) Tonsillitis

Is this the correct cause of death of YN?

Methodology to be identified with the expert.

Workstream 2

Understanding all the Evidence

Lead: Taymika Brandy – Operations Manager, Nurture Health and Care Ltd

The family believe that the entirety of evidential sources were not explored, which could have offered a contrasting viewpoint or an alternative perspective on the events. All available evidence should be analysed and reviewed by all clinical experts involved in the investigation.

Creating a list of evidential materials, then providing a table of how the evidence has been used in the investigation, identifying unused materials and why they have not been used. This will be provided as an appendix.

Workstream 3

GP Surgery

Lead: Dr Peter Carter – IPSI Lead, Independent Management Consultant

Why was there no working pulse oximeter?

Was the GP able to refer directly to TRFT paediatric ward?

Interview appropriate people in General Practice

Review policies including equipment policy and admission to paediatric policies.

Analysis of benchmarking to existing policies and procedures.

Workstream 4

YAS

Lead: Anneliese Hillyer-Thake – Independent Investigator & Clinical Reviewer, Nurture Health and Care Ltd

Did the difference of opinion in relation to YN attending TRFT or SCH contribute to the delay in YN's care.

Interviews will be undertaken with a paramedic expert.

Recommendations created from the expert's report.

Workstream 5

TRFT

Lead: Dr Peter Carter – IPSI Lead, Independent Management Consultant
Professor Damian Roland - Consultant in Paediatric Emergency Medicine

What were the staffing levels of the Emergency Department and the Paediatric ward at the time YN was being assessed? This includes what skill mix was present, i.e. what band or grade of staff were on duty and have the findings of the report led to any changes in staffing?

What was the bed occupancy of the paediatric ward at the time YN was being assessed?

Review of rotas, skill mix, and bed occupancy at this time.

Any quality improvement projects undertaken and evidenced.

Possible interview of Medical Director/Nursing Director or other Strategic Leads responsible for oversight.

Workstream 6

Specialist Review

Lead: Professor Damian Roland - Consultant in Paediatric Emergency Medicine

Was there an overdose of medication and if so what was the medication? If an overdose occurred, what was the possible consequences to YN?

Did the overdose impact the blood sugar levels of YN?

Was the overdose a contributing factor to YN's death?

Did the medical team respond to the concerns on 22 November 2022 that YN's mother had including the inconsistencies of medical opinion? Why did this occur?

Why was there a delay in reviewing YN's chest X-ray? Did this delay contribute to YN's outcome?

Was there a consultant paediatric cover on the weekend in question? If yes, what was their involvement in this case? If no, did this fall below the level of staffing expected?

What were the staffing levels on the Paediatric ward at the time YN was being assessed? This includes what skill mix was present, i.e. what band or grade of staff were on duty.

Methodology to be identified with the expert.

Workstream 7

Specialist Review

Lead: Sara Melville - Paediatric Nurse with expertise in Vascular Access Service

The cannula was considered to be leaking, was the cannula sited correctly? Was the cannula patent? Should the cannula had been replaced?

The nurse on duty over this weekend was perceived not to respond to the distress that the family were experiencing, respond to their requests for help or identify that YN's condition had worsened over the weekend. Why was this?

Methodology to be identified with the expert.

Workstream 8

PRESSURE Study

Lead: Peter Carter – IPSI Lead, Independent Management Consultant

There is a lack of consistency about whether YN was in the subject of a 'PRESSURE study'. If YN was a participant in the study, why was the policy in relation to research and consent not followed? If no, why were the family informed about YN's participation in this study.

Interview research team and consultant named or request for statement.

Workstream 9

Management of the communication related to the difference of opinion that has arisen in relation to the cause of death.

Lead: Shaney-Ann Charles, -Family Liaison Lead, Nurture Health and Care

The family were given several differential diagnoses that could be linked to his leukemoid reaction.

Ensure new information is shared with the family prior to the release of the report to ensure that they understand the nature of this new information.

Workstream 10

Overarching Analysis of Themes

Lead: The Decision-Making Group (DMG) – Specialists from Nurture Health and Care

The Decision-Making Group will review key stages of the investigation. The group is made up of a professionally diverse group of participants. Decisions are reviewed by the group in a structured way, drawing from Four Types of Knowing.

These are explained below:

1. What are the key facts of the case?
2. What procedures have (or not) been followed?
3. What are the perspectives of each member of the group?
4. What is everyone's intuition telling them about this case?

The Four Types of Knowing model is designed to identify key points, compliance with procedures, gain wider perspective and explore potential biases, and gain a sense of how the case feels to each member of the group.

The DMG will map the communication points along the family's journey from their timeline and using the information from the reports with possible supplementary questions if needed (through the specialists – not new contacts) ensure we identify key contacts, key decisions and other milestones.

At each key contact, key decision or milestone, we can identify whether on balance communication was effective or not, whether decisions were made appropriately or not, whether those decisions considered safety netting and mitigation for worse case scenario and whether person centred approaches, power dynamics or wider human factors impacted on the specific situation. This will identify what happened but also include why.

By utilising a Structured Judgemental Review Analysis we will include all the workstream leads to participate and include representation from the family and staff.

SEIPS and Bowtie Analysis will support to understand risk and mitigation, decision making points and how the family and staff were involved, and four ways of knowing: the facts, the legislation, standards, regulation, the perspective of others and the context.

Addendum

~ END~

Independent Investigation into the Care and Treatment of YN

Appendix 3 Addendum

(Created Post Factual Accuracy)

Incident ID:	IPSI YN
Date incident occurred:	23/11/2022

SUPPLEMENTARY INVESTIGATION STRATEGY – Workstream 11

Specialist Review

Leads: Dr Peter Carter – IPSI Lead, Independent Management Consultant

and Prof Vanessa Webb

Experts: Dr Elizabeth Whittaker - Paediatric infectious disease specialist

Professor Damian Roland - Consultant in Paediatric Emergency Medicine

Sara Melville - Paediatric Nurse with expertise in Vascular Access Service

Purpose

To review newly submitted evidence (received on 22.04.25), in relation to timings of videos taken between 15 and 22 November 2022, with specific interest regarding the video footage now being presented as 01:15 and not 07:41 as originally stated.

Allow an opportunity for witnesses and experts to provide comments and opinions in relation to this evidence.

1. **Interviews**:

Structured Re-Interview of Key Staff (Trauma-Informed)

- Interview Mum regarding her recollection of the night of the 20th/21st November 2022.
- Re-interview the staff at Sheffield Children's Hospital (SCH); namely the night shift nurse and ST2 doctor using a structured timeline:
    - Focus on what they observed, actions taken, and why no entries were made.
- Ask interviewed staff to view the video footage (if appropriate and supported) to see if it matches their memory.
- Revisit the staffing and supervision provision to confirm what oversight and intervention was implemented.

2. **Evidence Review – Technical and Clinical**:

- Video Footage Review. This will be physical review and opinion only, should technical analysis be required this will not be within Nurture's current remit.
- Electronic PEWS technology. Interview SCH Information Technology responsible person to understand calibration, available data and if this evidentially supports this investigation.
- Data Integrity & Time Verification checks:
    a. Electronic PEWS systems automatically timestamp vital signs and scores, offering a reliable chronological dataset.
    b. This can serve as a reference point to assess whether the video footage aligns with recorded physiological signs
    c. Identify whether PEWS thresholds were breached and what escalation actions (if any) were documented or triggered by the system.
    d. Electronic systems often include built-in escalation prompts (e.g. alerts to notify medical teams when thresholds are exceeded).
- Review whether these triggers were activated overnight, if they were acknowledged or overridden and a narrative rationale for any non-escalation from an expert in system.
- This can provide insight into whether staff were relying on clinical judgement over automation, and whether documentation aligned with professional reasoning.

3. **Expert review and opinion:**

    - Meet and allow experts to review interview and evidence findings, comment on the significance of this in relation to the video time changes and subsequent care planning.
    - Key question: *Was there evidence of respiratory distress at or around 01:15 on 21st November, and if so, was this recognised, documented, or acted upon by clinical staff?*

4. **Update report accordingly with findings:**

    - An additional Factual Accuracy process in relation to this Workstream will be undertaken as part of the updated report.

Timeline for Workstream 11: Review of Video Timing, PEWS Data, and Overnight Care

Step	Activity	Responsible	Timeline
1.	Interview Mum	Peter and Ness	29/4/25
2.	Secure technical data in relation to PEWS and understanding	Digital/IT + Sara	1/5/25
3.	Extract and review electronic PEWS scores and clinical documentation (00:00–08:00, 21st Nov)	Investigation Team	6/5/25
4.	Re-interview key clinical staff (nurse in charge of ward, night nurse, ST2 doctor and senior doctor)	Investigation Team	6/5/25-12/5/25
5.	Triangulation and analysis of evidence (video + PEWS + interviews + family account)	Experts	5/5/25-19/5/25
6.	Draft report summarising findings	Ness	26/5/25
7.	Redraft report	Ness	28/5/25
8.	Quality assurance and reformat report	Investigation Team	30/5/25
9.	Share with family and organisations for factual accuracy check	Investigation Team	5/6/25
10.	Incorporate FAC	Investigation Team	8/6/25
11.	Share with all the stakeholders including niche and the Coroner	Investigation Team	9/6/25
12.	Send the final report to NHSE	Investigation team	14/6/25

Overnight Clinical Oversight and Escalation into the Care of Yusuf on 20th–21st November 2022

Introduction and Purpose

This document forms part of the independent investigation into the care and treatment of Yusuf during his admission to Sheffield Children's Hospital on the night of 20th November 2022 into the early hours of 21st November 2022. The investigation will analyse the clinical decision-making, communication pathways, escalation protocols, and overall response to Yusuf's clinical presentation during this critical period.

The purpose of this specific report is to evaluate newly clarified information of a video timestamped at 01:14 on 21st November 2022. This video, filmed by Yusuf's mother, was included as part of the Evidence Bundle and attached to a WhatsApp message sent at 07:41, and has prompted further review of the timing and nature of clinical observations and staff responses overnight. The family had made reference to videos and photographs taken overnight on some of their interactions but this had not been extended to the evidence made available to the experts.

This report includes a review of statements made by;

- key staff, including the nurses involved in the care of Yusuf
- the Band 7 bleep holder,
- and the medical team involved in the care of Yusuf including the consultant on duty

Their accounts are analysed in the context of their expected roles and responsibilities, particularly regarding awareness of a deteriorating patient, clinical escalation processes, and the documentation (or absence thereof) of medical reviews or interventions.

The content of this report aims to contribute to the factual accuracy, transparency, and learning objectives of the broader investigation. It does not seek to apportion blame but rather to establish a clear and objective narrative of events to inform future safety, governance, and care standards.

Timeline: 20/11/2022 – 21/11/2022

From Nurse Expert Report:

Interview taken over 2 years since the events described.

The nurse in charge of the ward overnight on 20th and 21st stated she said she would attend handover and then allocate 3-4 patients per nurse; she would allocate the more notably sick patients to the next most experienced nurse but would ensure that the allocation did not mean they had all the more high acuity patients. She had no recollection of a doctor attending the ward during the night shift. She said as nurse in charge of the ward, she would expect to of been made aware that a doctor had been called to review a patient, by the nursing team. She also said that if a doctor had attended the ward, she would expect to see them and to be able to see the written notes of the review, or any discussions that took place. She has no recollection of being informed of the need to escalate for a doctor to undertake a patient review by the nursing team. As the nurse in charge that shift, she does not remember having the need, or being asked to come and see Yusuf, during the night by the nursing team. On viewing the video taken by Mum at 01:14am she assessed his work of breathing as moderate respiratory distress.

There was a band 7 bleep holder who confirmed they had no contact with Yusuf.

The consultant in charge on the night of the 20th November 2022 into the 21st November 2022, confirmed that she had no contact overnight and was not part of the escalation that night.

Time	Statement from Yusuf's mum	Additional evidence from Yusuf's family	Clinical and Nursing Records	Additional evidence from clinical or nursing staff statements
	Throughout the weekend, Yusuf's breathing was bad and when he pulled off his oxygen mask, his oxygen levels would fall as low as 80%. I repeatedly asked staff about this, including a male ENT doctor who was of medium build and Asian, but no one had an answer. It was assumed to			

Time	Statement from Yusuf's mum	Additional evidence from Yusuf's family	Clinical and Nursing Records	Additional evidence from clinical or nursing staff statements
	be linked to Yusuf's tonsillitis Throughout the night of 20/21 November 2022, I do not recall nurses regularly popping by to check on Yusuf. I felt that it was me raising concerns about Yusuf with nursing staff during the night and in the morning.			
00.02			From EWS report: PEWS taken by Ward Nurse – 6+ RR 42, O2 sats 100%, increased O2 to 7l/min, moderate respiratory distress, subcostal recession, tracheal tug and intercostal recession, HR: 121, 0 pain score, no concerns from mum recorded. No evidence of escalation from notes.	In Ward Nurse initial interview over 2 years since the incident, she initially stated that she did not recollect the need to escalate Yusuf however on a second occasion when shown the video - she stated 'I don't remember Yusuf being sat up in the bed. At midnight when his PEWS was 6 he had looked the same as in the video but was laid down in the bed. He had moderate WOB. I would describe him as having moderate/severe WOB in the video. He looks uncomfortable and in pain.

Time	Statement from Yusuf's mum	Additional evidence from Yusuf's family	Clinical and Nursing Records	Additional evidence from clinical or nursing staff statements
				I was concerned at midnight with Yusuf's presentation. I escalated him to the nurse-in-charge and bleeped the doctor who said they would come and review him. I increased his oxygen from 4L to 7L.'
00.00-01.00				Ward Nurse stated 'I cannot remember the name of the doctor or the time they came to review Yusuf.' She said she had turned the oxygen down to 4L/min
01.04			From EWS report: PEWS taken by Ward Nurse – 2+ RR 21,)2 sats 98%, O2 - 4l/min, no respiratory distress or IWOB, HR: 95, 0 pain score, , no concerns from mum.	Ward Nurse stated 'Mum did not raise any concerns when I read the pump. His PEWS at 1am was 2 with no increased work of breathing and Yusuf was asleep. The pump was to the left of Yusuf and mum was on a patient bed to the right of him. Yusuf was laid down but when he

Time	Statement from Yusuf's mum	Additional evidence from Yusuf's family	Clinical and Nursing Records	Additional evidence from clinical or nursing staff statements
				was awake and in pain he would sit up. I cannot remember how long he was sat up for. The PEWS was 2 at 1.04. I cannot explain why there is a difference between the PEWS at 01.04 and the video at 01.14. Yusuf had ibuprofen at 1.15 for throat pain.
01.14		Video: Moderate to Severe respiratory distress: IWOB, RR approx. 32, 93% O sats without mask and HR 137		The On Call Night Doctor and Nurses confirmed that the video showed a child with moderate to severe respiratory distress. She believed if she had seen this presentation overnight, she would have started the nebulisers at that time and escalated his case for more senior advice, however she was not told of Yusuf until the 07.30 bleep. It was also noted that the video was

Time	Statement from Yusuf's mum	Additional evidence from Yusuf's family	Clinical and Nursing Records	Additional evidence from clinical or nursing staff statements
				described as soft stridor, and she had not documented this in her notes so although she cannot remember specifically this detail it may be that Yusuf's presentation was not identical to her notes describing a fine wheeze and reduced air entry when she saw at 07.45.
01.15			From Medicines Chart given ibuprofen	
02.00 – 03.00	I have a very clear recollection of a night doctor examining Yusuf around 2/3am on Monday morning on 21 November 2022. Yusuf was presenting the same as in the video that I took of him at 01.14am. In other words, he was still struggling to breath. He was in pain and distressed. 11. The junior doctor that saw Yusuf at 2/3am was female, young, slim and Asian; I thought she may have been Indian. She was wearing a mask. I	In the verbal interview, Yusuf's mum also stated that the doctor had a red bindi but clarified in the statement this may not be case.	Fluid chart stated 27mls/hr	On discussing the bindi with The On Call Night Doctor she recalled the doctors who had been on shift overnight, and thought it unlikely that either would have worn a bindi. She recalled that some of the nurses working on The Ward do sometimes wear a bindi and wondered if mum may have been recalling a nurse, rather than a doctor She confirmed that nurses wear

Time	Statement from Yusuf's mum	Additional evidence from Yusuf's family	Clinical and Nursing Records	Additional evidence from clinical or nursing staff statements
	do not remember if she had an accent. 12. The night doctor stood at the left side of Yusuf's bed and when I told her about my concerns including his breathing; she leant over and examined Yusuf using a stethoscope. This doctor told me that Yusuf's chest was clear and he did not need a nebuliser. I trusted what the doctor told me, although I knew something was seriously wrong and felt that Yusuf was getting worse.			uniforms rather than scrubs; doctors wear either scrubs or their own clothes. The On Call Night Doctor clarified that she has never worn a bindi in the workplace as culturally she is Sikh, not Hindu. It was also discussed that the doctors on duty were mainly male. The On Call Night Doctor confirmed she did not examine Yusuf at any time overnight until approximately 07.45
02.15			Nursing Records stated 'Observationally stable and apyrexial other than ventilating in 4L of oxygen. No increase work of breathing. IVI running cannula working well. Given paracetamol at 2100 due to being uncomfortable. Is now settled. Mum resident and attending to care.	The Ward Nurse gave no additional information

Time	Statement from Yusuf's mum	Additional evidence from Yusuf's family	Clinical and Nursing Records	Additional evidence from clinical or nursing staff statements
			No concerns at present.	
03.00			Fluid chart stated 27mls/hr.	
03.00 – 04.00				From Letter written from the Consultant in paediatric critical care, dated 29th September 2023: Included 'Mrs Ahmed also had concerns related to non-escalation of treatment over one night (Sunday 20th November to Monday 21st November 2022). Yusufs breathing had got worse, he was reviewed by a doctor between 03.00-04.00 hrs who felt his chest was clear and did not order any treatment or escalate his care.
03.02			From EWS report: PEWS taken by The Ward Nurse – 2+ RR 21, o2 sats 100%, O2 - 4l/min, no respiratory distress, HR: 98, 0 pain score, no concerns from mum	The Ward Nurse gave no additional information
03.30			From Medicines Chart: Paracetamol given at 03.30	
04.00			Fluid chart stated 27mls/hr.	

Time	Statement from Yusuf's mum	Additional evidence from Yusuf's family	Clinical and Nursing Records	Additional evidence from clinical or nursing staff statements
04.30-05.00				The On Call Night Doctor stated she had seen mum in the corridor by the nurse's station when she had left the bay after seeing another child. This was about 04.30 to 05.00. Mum had looked withdrawn so The On Call Night Doctor spoke to her to offer some reassurance, but she cannot remember the exact detail of what was said. The On Call Night Doctor confirmed she had never seen Yusuf at this point and was not asked to see him at that time.
05.00 – 05.30	At around or just after 5am, I was sat on the bed with Yusuf. I remember feeling uncomfortable and realised that the bed was wet. Upon further investigation, it was clear that Yusuf's cannula was leaking. I reported this to the nurse and took two photographs at 05.29am		Fluid chart stated 'OFF'	The Ward Nurse gave no additional information but the cannula is discussed in Expert Report in Appendix 5

Time	Statement from Yusuf's mum	Additional evidence from Yusuf's family	Clinical and Nursing Records	Additional evidence from clinical or nursing staff statements
	I am clear that I did not speak to any doctor at or around 5am and Yusuf was not physically examined. If I had, I would have told them that Yusuf was getting worse and my concerns about his breathing and his tummy pain. Yusuf also would not of been asleep; he was in no condition to sleep due to his breathing difficulties and the pain he was in. It was also around this time that his cannula leaked.			
05.29		The first photograph is exhibited as SA/2; this is of the bed and shows the cannula leak. The second photograph is exhibited as SA/3; this is of Yusuf's right hand with the cannula inserted and bloody bandages.		This is addressed in expert report – Appendix 5

Time	Statement from Yusuf's mum	Additional evidence from Yusuf's family	Clinical and Nursing Records	Additional evidence from clinical or nursing staff statements
05.58			From EWS report: PEWS taken by The Ward Nurse – 2+ RR 24, o2 sats 100%, O2 - 4l/min, no respiratory distress, HR: 96, 0 pain score, T 35.9, no concerns from mum	The Ward Nurse gave no additional information
06.00			From Medication Chart: Benzyl Penicillin administered	
06.00			From Medication Chart: Oromorph given at 0600	
06.30			Multiple pain relief given overnight. Occasional work of breathing when awake and in pain otherwise observations are stable. Complaining of feeling hot but temperature is 35.9. Bandage wet and covered in blood. Port was loose. IVAB given as prescribed.	The Ward Nurse gave no additional information
07.00			From Medication Chart: Metronidazole administered	
NURSE HANDOVER AT 0700				During the interview with the Day Ward Nurse from the day shift who took over care for Yusuf at this time, she stated that she

Time	Statement from Yusuf's mum	Additional evidence from Yusuf's family	Clinical and Nursing Records	Additional evidence from clinical or nursing staff statements
				could not remember anything particularly remarkable being mentioned at handover of patients and their conditions. She was not in charge of the ward but was his allocated nurse for the shift.
APPROX 07.30			From nursing record, written retrospectively. Care taken over from night team at 07.30am. On arrival, increased work of breathing (moderate), bleeped medical SHO and gave salbutamol inhaler.	The On Call Night Doctor then stated that she has been 'bleeped' at about 07.30 and was asked to undertake a clinical review of Yusuf as the nurses were concerned about him.
APPROX 07.30			Written from Medicines Chart: Given 2 puffs salbutamol at 07.30 from PRN side of medicines chart by ward nurse.	
APPROX 07.40				At approximately 07:40am the Day Ward nurse entered Yusuf bedspace as the infusion pump was alarming which she presumed had woken him up, as he had been

Time	Statement from Yusuf's mum	Additional evidence from Yusuf's family	Clinical and Nursing Records	Additional evidence from clinical or nursing staff statements
				asleep beforehand. She was immediately concerned he was in moderate respiratory distress. She bleeped the doctor on call and gave the salbutamol, which was prescribed PRN, whilst she was waiting for the doctor to attend the ward.
07.41		WhatsApp: Feel like he is getting worse He had such a hard night With breathing and pain – sent with video taken at 01.14		
07.42		WhatsApp: Doctor gna come later haven been yet		
07.43		WhatsApp: Feel like his has been worse tonight than when he came in		
07.44		WhatsApp: He was jumping up at night in pain and pulling it off Cz his		

Time	Statement from Yusuf's mum	Additional evidence from Yusuf's family	Clinical and Nursing Records	Additional evidence from clinical or nursing staff statements
		cough gets really bad. This message refers to Yusuf pulling off the oxygen mask when he was coughing.		
07.44		WhatsApp: And his chest and throat sounds so loud he works really hard to breathe		
APPROX 07.45				Nurse on the ward remembered that the doctor attended the ward quickly and prescribed further back-to-back nebulisers as per the protocol, the administration of which takes around 30 minutes. At the end of this course there was no response, or improvement in Yusuf respiratory condition. She said the doctor had gone to discuss Yusuf's condition with more senior colleagues and attend handover of the medical

Time	Statement from Yusuf's mum	Additional evidence from Yusuf's family	Clinical and Nursing Records	Additional evidence from clinical or nursing staff statements
				teams during this 30-minute administration time.
APPROX 07.45	I do not believe that Yusuf was examined by a doctor around 7.45am on 21st November 2022.	WhatsApp: SA: I'm getting realli my stressed out SA: Night doctor did come have a look SA: Just listened into chest and said it doesn't sound wheezy		The On Call Night Doctor stated that the timings were never exact as often notes and the drugs chart were written retrospectively, or the time was not noted exactly due to verbal orders being given whilst at the bedside actively reassessing the patient. After examining Yusuf, she prescribed a set of salbutamol nebulisers and then went to handover where she had stated that she was worried about Yusuf and could he be prioritised and seen urgently. The On Call Night Doctor also felt reassured as she knew that the ENT team were attending the ward at the same time so that he was being actively

Time	Statement from Yusuf's mum	Additional evidence from Yusuf's family	Clinical and Nursing Records	Additional evidence from clinical or nursing staff statements
				reviewed by both teams.
07.48		WhatsApp: No way we coming home today He had such a hard night		
07.49		WhatsApp: I'm actually getting realli stressed! Kept jumping up in pain and breathing soo heavy And crying in pain. Feels worse than before since last night		
07.50		WhatsApp: Just giving him painkillers now Doc gna come in a bit init		
07.59			From EWS report: PEWS taken by KJ – 4+ RR 32, o2 sats 97%, increased O2 to 5l/min, moderate respiratory distress, subcostal recession, tracheal tug, inspiratory or expiratory noise, HR: 112, 0 pain score, no concerns from mum	She recalls mum being very clear that she was very concerned regarding Yusuf's breathing and his work of breathing during this time. On showing her the video (01:14 hrs video) taken by mum, she assessed it as

Time	Statement from Yusuf's mum	Additional evidence from Yusuf's family	Clinical and Nursing Records	Additional evidence from clinical or nursing staff statements
				moderate work of breathing and said that it was very much the same as the work of breathing, she actioned at 07:40hrs due to her concerns for his work of breathing.
APPROX 08.10 – 08.15			From Medicines Chart: Salbutamol Neb written by The Ward Consultant (Night shift) for 8.10 and 08.15	
APPROX 08.15			From medical records: Seen by med team – ATSP due to NS concerns of IWOB. Given 2 puffs salb before my arrival did not make a difference. History noted: Admitted 2/52, treated as LRTI and tonsillitis. Obs: RR was 32, sats 97% on 5L, HR112, T 35.9, C/O chest tightness and says it hurts to breath, Mum reports Yusuf his WOB has been worsening O/E reduced air entry bilaterally, ?fine wheeze bi basal. Abdo soft, no organomegaly. Plan: 1. B2B salb nebs and mixed	The On Call Night Doctor in her interview stated on reviewing the drug administration chart, the PRN salbutamol had been given by the nurses at 07.30, two doses of nebuliser were written up at 08.10 and 08.15 and given at 08.15 and 08.30 but these were possibly retrospectively written as the nurses had been given a verbal order and would have started these before she sat down to prescribe and

Time	Statement from Yusuf's mum	Additional evidence from Yusuf's family	Clinical and Nursing Records	Additional evidence from clinical or nursing staff statements
			ipratropium. 2. Relieved post neb – a/e improved on 2nd neb. For salbutamol. Early morning team review. Consider extra dose dex. 3. Difflam for throat pain – mum to use regularly.	write in Yusuf's notes. All of these are signed by The On Call Night Doctor. The notes were written as per normal practice after the examination so The On Call Night Doctor.would have seen Yusuf when she arrived on the ward at 07.45 approximately and then written up later at 08.15 approximately. She also did not leave the ward and was reviewing Yusuf over the 30 minutes until she went to handover so the notes reflect a period of time which involved the clinical assessment of Yusuf but also discussion with his mother and she noted that mum felt he had got worse overnight and would have included the nurse's impression of his

Time	Statement from Yusuf's mum	Additional evidence from Yusuf's family	Clinical and Nursing Records	Additional evidence from clinical or nursing staff statements
				improvement with treatment.
APPROX 08.20 –8.30			From Medicines Chart: Salbutamol Neb written by The On Call Night Doctor at 08.20 and given by EC at 08.30	
			From nursing record, with no specific times: SHO reviewed, Yusuf very tight. Back to back nebulisers given as per drug chart. Minimal improvement.	
08.23		Video: Moderate to Severe respiratory distress: IWOB and now splinting on back and shows Yusuf in pain		
08.23		Video: As above		
08.30 -09.00				Handover was attended by The On Call Night Doctor, The Consultant Paediatrician and The Day Team: Doctor and all 3 remember that Yusuf was identified as needing seeing first and The Day Team: Doctor did

Time	Statement from Yusuf's mum	Additional evidence from Yusuf's family	Clinical and Nursing Records	Additional evidence from clinical or nursing staff statements
				not commence the ward round and went straight to The Ward. The Day Team: Doctor stated that she had come to work that morning and was in handover when The On Call Night Doctor had described Yusuf and that she was concerned and that she had given him salbutamol but could the team prioritise Yusuf. It was agreed that The Day Team: Doctor would do straight to The Ward which she did.
APPROX 08.30			From Medicines Chart: Ipratropium Bromide Neb signed by The On Call Night Doctor. given at 08.30 EC	
08.30-09.00				ENT Registrar went to The Ward sometime between 8.30 and 9am as part of the routine ward round. It was decided to see Yusuf first as he

Time	Statement from Yusuf's mum	Additional evidence from Yusuf's family	Clinical and Nursing Records	Additional evidence from clinical or nursing staff statements
				was quite unwell. On examining Yusuf, they could see that his tonsils were enlarged and inflamed and there was exudate. They described him as being restless, struggling to breath and sitting on his mother's knee. They described Mum as being stressed and concerned about Yusuf. She confirmed that she was aware of The On Call Night Doctor review.
APPROX 08.45			From Medicines Chart: Salbutamol Neb signed by The On Call Night Doctor and given at 08.45 EC	
08.45		Video: On mums lap and has nebuliser working		
08.45		WhatsApp: He proper threw a right fit pulling everything off and refusing to wear masks		
08.46		WhatsApp: I proper started crying I can't		

Time	Statement from Yusuf's mum	Additional evidence from Yusuf's family	Clinical and Nursing Records	Additional evidence from clinical or nursing staff statements
		see him like this he is getting worse		
08.50		Video: On mums lap and has nebuliser working		
09.00-09.30				The Day Team: Doctor would have arrived around 0900 to 0930 as she went straight to The Ward after handover and never did leave the ward over the morning as she was so concerned. When The Day Team: Doctor arrived on the ward, the nurses asked her to immediately see Yusuf as they were worried. She went straight to Yusuf and was aware of his breathing on entry to the bay and could she could see he was struggling to speak, had got worse overnight and struggled to sleep.
09.00	It is my recollection that after the 2/3am examination, I did not		From medical records: ENT	This was also confirmed further in a written

Time	Statement from Yusuf's mum	Additional evidence from Yusuf's family	Clinical and Nursing Records	Additional evidence from clinical or nursing staff statements
	see the night doctor described above again or any other doctor until the ENT doctor attended around 9am on Monday 21 November 2022. This was the same ENT doctor that saw Yusuf over the weekend, whom I have already described above. This doctor appeared focussed on Yusuf's tonsils and not his breathing.		medical (Fellow) and (SHO). Tonsillitis LRTI (Ben Pen and Metro) Viral induced wheeze. Dex stopped 3/7 ago. On back to back nebs currently. Note medical overnight R/V – for WR R/V med reg. Mum present, tired and restless not slept well at all. C/O lower abdo pain. O/E Grade IV tonsils and exudate, Multiple neck LN bilaterally, in O2. Impression: Acute tonsillitis, LRTI/asthma NS report improving slightly since last seen. Plan: Cont Ab and Difflam. Phoned for abdo and chest, Please contact ENT fellow if you want to discuss.	statement by ENT Registrar.
09.18			From EWS report: PEWS taken by SM – 6+ RR 30, o2 sats 100%, increased	

Time	Statement from Yusuf's mum	Additional evidence from Yusuf's family	Clinical and Nursing Records	Additional evidence from clinical or nursing staff statements
			O2 to 8l/min, on a nebuliser, moderate respiratory distress, subcostal recession, inspiratory or expiratory noise, HR: 162, 0 pain score, , no concerns from mum	
09.30			From PEWS report: PEWS taken by nurse – 7+ RR 40, o2 sats 100%, decreased O2 to 5l/min, moderate respiratory distress, subcostal recession, inspiratory or expiratory noise, HR: 150, 0 pain score, T 36.8 , no concerns from mum	
APPROX 09.40			From Nursing Record written retrospectively: Informed medical registrar at about 9.40. I was very worried, moderate to severe WOB. Reviewed medical records. Yusuf voice very hoarse, not able to talk full sentences. Second lot of back to back nebulisers given. Seen by ENT this morning, advised happy to review again if concerned.	

Time	Statement from Yusuf's mum	Additional evidence from Yusuf's family	Clinical and Nursing Records	Additional evidence from clinical or nursing staff statements
APPROX 09.40			From Clinical Record: written retrospectively: The Day Team: Doctor Asked to see Patient urgently concerns with WOB. Seen with mum. History as noted. Admitted 18/11 and managed as VW, off salbutamol over weekend. Re-commenced this morning as wheezy. Salbutamol ned X1, Mixed Nebs X1, salbutamol hourly 8.30, 9.30. Managed as tonsilitis and LRTI. IV Benzylpenicillin and metronidazole. Dexamethasone X 48 hours stopped this morning. This morning complaining of abdominal pain, 'I can't breathe', intermittently removing oxygen mask, afebrile. Obs RR 37-40 73% O2 sats in air. 100% in 8L/min. T 36.8, BP not done	The Day Team: Doctor described Yusuf as presenting with unusual symptoms which were concerning but he had a hoarse voice, and the mixed picture of upper respiratory tract infection, tonsillitis and other symptoms were unusual so challenging and she discussed Yusuf with other colleagues calling ENT to return and discussing with The Consultant Paediatrician who was the consultant that day. The Day Team: Doctor remembers talking to Yusuf's mum and another male family member who arrived later but she cannot remember the detail of what was said but she would have described being concerned.

Time	Statement from Yusuf's mum	Additional evidence from Yusuf's family	Clinical and Nursing Records	Additional evidence from clinical or nursing staff statements
			recently, HR 150-160 O/E A: Partial airway obstruction, tonsils examined by ENT, reported grade IV with exudate, intermittent soft stridor, hoarseness +++, Not able to complete full sentences. B: Significant nasal flaring, tracheal tug, sternal recession, abdominal recession, subcostal recession. C. CRT <2 secs HS, D agitated with drowsiness. Blood gases included. Impression Severe acute asthma exacerbation (life threatening), concerns partial airway obstruction. Detailed Plan included including review every 20 mins	The Day Team: Doctor stated Yusuf continued to have nebulisers and was on oxygen but was still quite wheezy, had had increased respiratory effort. The stridor with upper airway obstruction was concerning so ENT were also reviewing. The Day Team: Doctor stated she remembers having to put in a cannula. She repeated blood tests and noted he was tachycardic but no temperature and was not improving. The Day Team: Doctor described how she did not manage to see anyone else that morning.

Time	Statement from Yusuf's mum	Additional evidence from Yusuf's family	Clinical and Nursing Records	Additional evidence from clinical or nursing staff statements
09.45			From Medicines Chart: Salbutamol Nebs written up by The On Call Night Doctor for 10am given at 09.45 EC	
10.00	Yusuf was next examined by a doctor on the Ward around 10am. I would describe the doctor as female, middle aged and of medium build; I thought she may have been African or Nigerian because of her skin tone. She was well spoken.			This was confirmed as The Ward Doctor
10.04		WhatsApp: SA: He just pulled him mask off and said I can't breathe o can't breath SA: I really can't SA: he is struggling soo may		
10.05		WhatsApp: H: Have you told the nurses? SA: Yes SA: Doctor should be coming SA: Nurse said he sounds it		
10.06		WhatsApp: SA: See what doctors say.		

Time	Statement from Yusuf's mum	Additional evidence from Yusuf's family	Clinical and Nursing Records	Additional evidence from clinical or nursing staff statements
10.18	As soon as the doctor walked onto the Ward and saw Yusuf, she asked if he had been like this during the night and if he had been seen by a doctor. She repeated the same questions at least three times and appeared visibly shocked by Yusuf's presentation. The doctor said she could hear Yusuf's chest from the end of the bed.	WhatsApp: Doctor just been She said she not happy with his breathing so she onto it They gna give him a different type of oxygen And more nebulisers and do blood test She said Cz he has got too much going on at once		In interview, it was described that Yusuf's mum had stated that she had commented on the absence of medical review but The Day Team: Doctor states she would not have said this as she was comforted by the fact that ENT had already seen Yusuf and that The On Call Night Doctor had commenced salbutamol. The Day Team: Doctor discussed that she might have stated that she this was surprised as this was an unusual presentation as he had clearly been in hospital for over 48 hours and he was not getting better so she was considering what alternative diagnosis needed to be considered with wheeze and the emerging picture of pneumonia.

Time	Statement from Yusuf's mum	Additional evidence from Yusuf's family	Clinical and Nursing Records	Additional evidence from clinical or nursing staff statements
				This was one of the few times in her many years that she rang her consultant to help and spoke to other senior members of the team and never returned to the ward round.
THE CHRONOLOGY HAS CONCLUDED AT 10.10AM WHEN THE DAY TEAM: DOCTOR ATTENDED AND THERE IS EVIDENCE OF ASSESSMENT, INTERVENTIONS AND ESCALATION				
ADDITIONAL INFORMATION RELATED TO THE WEEKEND				
	Yusuf then developed a cough towards the end of the weekend. This got worse during the night of 20/21 November 2022. On 20/21 November 2022, Yusuf had a difficult night and was struggling to breathe. He was not able to sleep or lie down. Yusuf's breathing was loud and laboured. He would jump up trying to catch his breath and pull off his oxygen mask. Yusuf's cough changed to a choking cough as he struggled to breath. Yusuf was in pain and could not speak, so I was lip reading. He complained		In clinical record commented that about throat swabs taken. COVID negative. There was a further entry that there were no respiratory samples on system and to try and use the COVID sample.	In Interview, On Call Night Doctor was asked if there was an explanation for the absence of identifying information on the page of medical records. The On Call Night Doctor stated she now always made sure there was identifying information on each side of the page. The stripe on the page showed that it was the reverse side of the page so would have an identifier on the front page. This was a common

Time	Statement from Yusuf's mum	Additional evidence from Yusuf's family	Clinical and Nursing Records	Additional evidence from clinical or nursing staff statements
	about his tummy hurting. As soon as the cannula was inserted into Yusuf's right hand, I had been complaining to nursing staff that it was leaking as the bandages were wet, but this was not checked. I was told by different nurses that they thought Yusuf was drooling. When the leaking cannula was removed, the hospital tried to relocate this elsewhere including Yusuf's feet, hands and arms, but this was unsuccessful. I have subsequently learnt that this was because Yusuf's body was shutting down and his blood vessels restricted. By Monday morning on 21 November 2022, Yusuf's tummy pain was worse. When I told a nurse about this, she told me it was muscular pain. I did not feel that the nurses took my concerns about Yusuf seriously and I was ignored.			practice in Sheffield Children's Hospital that practitioners ensured that there was an identifier on the front but did not necessarily put it on both sides. This was confirmed in writing by the senior team that this was the reverse of a page which flowed with the notes.