NORTH OF ENGLAND INTENSIVE CARE SOCIETY

DELEGATE HANDBOOK

NEICS WINTER 2022 MEETING

Tuesday 15th November 2022, The Catalyst, Newcastle

NEICS
NORTH OF ENGLAND
INTENSIVE CARE SOCIETY

www.neics.org.uk

Welcome to the North of England Intensive Care Society Winter 2022 Meeting

Dear colleagues,

A heartfelt welcome to all delegates at our 2022 NEICS Winter meeting. Our Spring Re-connect meeting earlier this year saw so many of you return to one of the first large regional critical care meetings undertaken face-to-face in the North-East following difficult pandemic times. With our NEICS meetings, we aim to bring together critical care colleagues working in the region to provide a forum for medical, nursing and AHPs. The philosophy, to share scientific knowledge and social interaction with colleagues, is close to our heart.
We hope you enjoy today's programme. Together we are looking forward to hearing a wide variety of presentations from national speakers in critical care. They will share their expertise on topics covering ethical challenges with the diagnosis of neurological death, the management of sickle cell disease in critical care, organisational and clinical areas of maternal critical care, home ventilation, critical care burns management and an unusual case of management beyond death. We are delighted to bring back our traditional 5 significant and recent papers in the critical care literature talk and are also pleased to re-introduce our trainee presentation slot, for which we shortlisted the three highest scoring abstracts submitted by trainees in the region.

A big thank you to you for your support of the Society as a professional and social network. Your continued and encouraging engagement helps to keeps the NEICS community alive. It also challenges us to ensure we provide regular meetings to facilitate both learning and social interaction with critical care colleagues from across the professional spectrum.

The NEICS committee members have worked tirelessly to organise this meeting and we are very thankful for their continued and innovative work to provide these meetings.
We hope you enjoy the day.

On behalf of the NEICS committee,

Uwe Franke
NEICS President

Ian Nesbitt
Past NEICS President

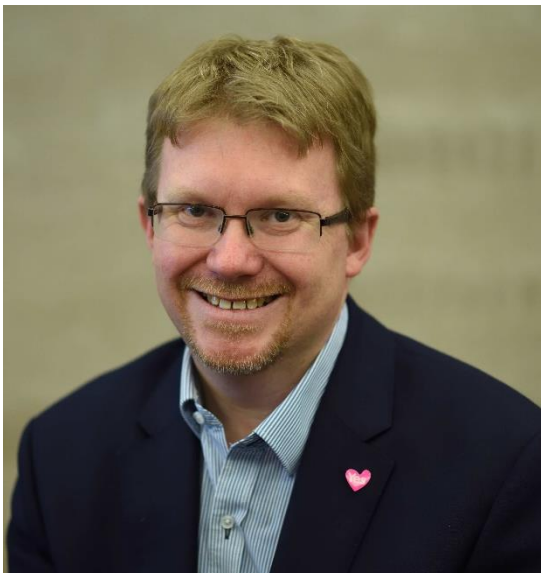
Diane Monkhouse
NEICS Treasurer

Programme of Events

08.20 – 08.50	**REGISTRATION** **Tea, Coffee and Trade Stands**	
08.50 – 09.00	**WELCOME AND INTRODUCTION**	
	Session 1	
09.00 – 10.30	**Recent challenges to the diagnosis of death using neurological criteria**	Dale Gardiner
	Sickle cell disease in critical care	Brigit Greystoke
	Questions & Discussion	
10.30 – 10.50	**REFRESHMENTS & TRADE STANDS**	
	Session 2	
10.50 – 12.20	**The North East Assisted Ventilation Service: Who, what, how, why…?**	Ben Messer
	Maternal critical care I – Set up and data from the Scottish MCC network	Arlene Wise
	Questions & Discussion	
12.20 – 13.20	**LUNCH & TRADE STANDS**	
	Session 3	
13.20 – 14.50	**Maternal critical care II – Maternity patients: Top ten things you wish you knew**	Arlene Wise
	Five significant papers in critical care	Gavin Hardy
14.50 – 15.20	**Trainee presentations**	
	Questions & Discussion	
15.20 – 15.40	**REFRESHMENTS & TRADE STANDS**	
	Session 4	
15.40 – 17.10	**Burns critical care in a regional burns centre**	Ian Clement
	Every day's a school day	Ian Nesbitt
	Questions & Discussion	
17.10	**MEETING CLOSE**	

Speaker Biographies & Abstracts

Dale Gardiner – Recent challenges to the diagnosis of death using neurological criteria



Dr Dale Gardiner is a Consultant in Adult Intensive Care Medicine at Nottingham University Hospitals NHS Trust and the Associate Medical Director – Deceased Organ Donation at NHS Blood and Transplant.

His professional interests are medical ethics, the diagnosis of death and deceased organ donation.

Dale is a Board Member of the Faculty of Intensive Care Medicine and Chair of the Professional Affairs and Safety Committee. He is co-chair of the Academy of Medical Royal Colleges task and finish group to update the 2008 Code of Practice for the Diagnosis and Confirmation of Death.

Originally, Dale came from Australia but migrated to the UK in 2002.

Whilst death has not changed over the past 13 years since the 2008 Code of Practice, medical practice and technologies have advanced, particularly in the fields of resuscitation and intensive care. Some of these advances have led to new questions and legal challenges to the diagnosis of death that could not have been foreseen by the 2008 Code and its predecessors. Good practice requires that the Code of Practice be updated so it can continue to provide authoritative guidance to UK doctors, and others who diagnose death.

Brigit Greystoke – Sickle cell disease in critical care

I am a consultant haematologist at the RVI in Newcastle. I am clinical lead for haemoglobinopathies both within NUTH and for the North East England Specialist Haemoglobinopathy Team, and I sit on the National Haemoglobinopathy Registry steering group. I went to medical school in Edinburgh, did SHO training in Newcastle, Oxford and London, registrar training in New Zealand, Edinburgh and Manchester, and made a very happy return to the North East of England in 2013.

My specialist interest is in inherited red cell disorders, including sickle cell disease, and I am really keen to improve the care for patients with this awful disease. It is very poorly researched despite being the first inherited disease for which the genetic mutation was identified. It is also greatly under-resourced in comparison with other genetic illnesses of similar disease burden. We currently have applications underway for grant funding for basic research areas including epidemiological studies of sickle retinopathy, and I am always keen to hear how you think care for these patients could be improved.

Ben Messer – The North East Assisted Ventilation Service: Who, what, how, why…?

I am a Consultant in Home Ventilation and Intensive Care Medicine in Newcastle-upon-Tyne and the clinical lead of the North East Assisted Ventilation Service.

My main critical care interest is acute non-invasive respiratory support. Within home ventilation, my interests are tracheostomy ventilation, upper airway dysfunction and secretion management in MND, and the respiratory and perioperative care of neuromuscular patients.

Arlene Wise – Maternal critical care

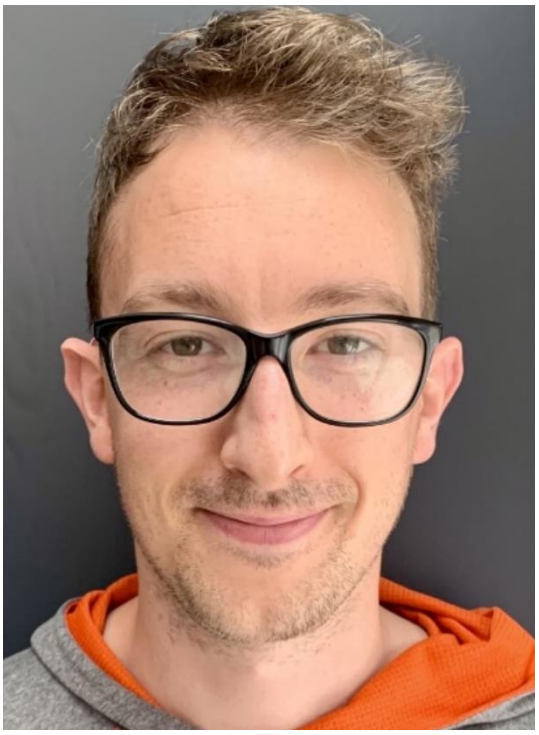
Arlene is a consultant anaesthetist with a special interest in obstetric anaesthesia, and in particular maternal critical care provision in Edinburgh Royal Infirmary.

She established, and currently chairs, the Scottish Maternal Critical Care (SMaCC) network. SMaCC was founded to raise awareness of MCC/EMC through local advocacy and education of the entire MDT. They have forged links with SICSAG, leading to the introduction of wardwatcher into Scotland's maternity units to capture obstetric HDU data which is published in the annual report alongside obstetric critical care data and more recently, covid specific maternity data.

She had led the development of a MCC module within the online Critical Care MSc run by Edinburgh University.

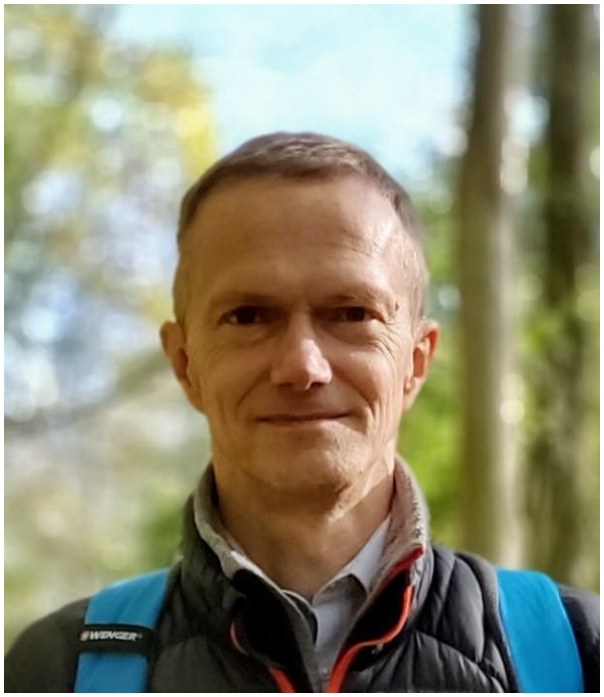
She is also an anaesthetic assessor for MBRRACE confidential enquiry into maternal deaths.

Gavin Hardy – Five significant papers in critical care



Newly appointed consultant in Anaesthesia and Intensive Care Medicine at the Freeman Hospital having completed training in the North East. Professional interests in point of care ultrasound, critical care echocardiography and medical education.

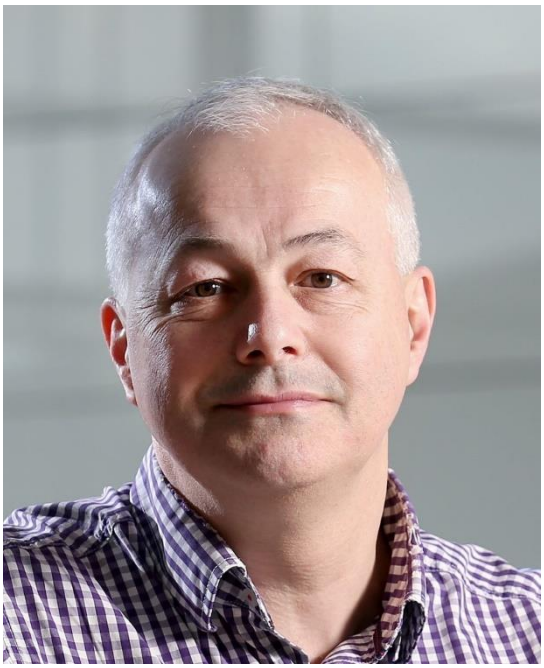
Ian Clement – Burns critical care in a regional burns centre



Dr Ian Clement has been a consultant in critical care and anaesthesia at the Royal Victoria Infirmary in Newcastle since 2007 and for the last eight years has been head of service for the Ward 38 general adult critical care unit. His clinical interests involve the range of work seen in a general adult critical care unit with an additional emphasis on the specialist care provided for burns, upper gastro-intestinal surgery and maternal medicine. In addition he has supported the development of a pro-active clinical research team who actively recruit patients to NHS portfolio studies. He provides anaesthesia for neuro-surgery, colo-rectal and maxillo-facial surgery. His major non-clinical focus in recent years has involved acting as lead clinical advisor to Estates Services in developing a major project on the RVI which will ultimately deliver a new, modern, carbon-neutral hospital wing housing multiple specialist regional services including the largest integrated critical care unit in the North of England.

Major burns injuries are thankfully rare but when they arise they present a unique set of challenges to the clinical teams involved in the care of these patients. Services are delivered through a small number of regional and supra-regional burns centres with burns critical care being delivered either in small stand-alone burns intensive care units or as part of larger integrated critical care units. Critical care input is frequently required for a very prolonged period of time, beginning with the initial resuscitation phase, subsequently moving on to the management of the inevitably prolonged inflammatory response and peri-operative care during often extended periods of surgical intervention. Success relies upon a close working relationship between burns intensivists, burns surgeons and burns anaesthetists. A wider MDT with expertise in burns management needs to be fully engaged throughout the process to achieve the best outcomes.

Ian Nesbitt – Every day's a school day



I qualified from Newcastle Medical School in 1991, and trained in the North of England, Australia and New Zealand. I have been a consultant at the Freeman Hospital since 2002. My job involves equal proportions of both Anaesthesia and Critical Care in a 23 bed general Adult Unit.

Most of my CV is now in the nature of "I used to be" which allows me to speak truth to power and be more awkward than when I was younger. The more I know, the less I'm certain of, so I plan to retire before I forget everything I was ever sure about.

In the meantime, I'm taking the opportunities arising from the pension tax fiasco to cycle, hike, scuba dive and finally understand what people mean when they talk about having a "work -life balance".

A career first is presented for discussion and thought.

Trainee Presentations - Abstracts

Presentation 1

Authors: Emma Allen, Theodora Voitcu

TITLE

"You've prescribed *how much* insulin?" Management of propranolol overdose

CASE DESCRIPTION

This case discusses the management of a 48 year old female who took an unknown quantity of propranolol with alcohol. She presented with seizures and reduced GCS, developing unmanageable agitation requiring sedation and intubation. She was hypotensive despite adrenaline infusion and was therefore quickly started on glucagon and high dose insulin therapy. The insulin was dosed as per the National Poisons Information Service (NPIS) (2), titrating up to a rate of 600 units of insulin per hour.

Glucagon and high dose insulin provided stability to this patient's resuscitation, though she had ongoing dependence on several therapies. We sought direct advice from NPIS on day three of admission, due to ongoing high vasopressor demands, complicated by high sedation requirement. NPIS advised weaning insulin and glucagon before removing noradrenaline and vasopressin (contrary to TOXBASE advice), after which her MAP remained stable and we were able to wean other vasopressors and sedation more safely. Unfortunately, her stay was complicated further by fluid overload and she required 5 days of haemofiltration, as well as treatment for pneumococcal respiratory infection related to aspiration. Following nine days of treatment on ITU she was discharged home with ongoing support from the Community Mental Health team.

DISCUSSION

Propranolol is commonly prescribed for anxiety and panic disorders and can be purchased online for as little as 31 pence a tablet (1). In overdose the effects of profound hypotension, seizures and coma can be deadly (2). Due to its beta adrenergic receptor antagonism conventional vasopressor therapy can be ineffective and alternative agents should be used.

Insulin has direct inotropic effect whereas Glucagon acts to increase intracellular cyclic AMP (3). Their relevance in beta blocker overdose relates to independence of the adrenergic receptors in sympathomimetic activity. Complications of therapy include hypoglycaemia and hypokalaemia, both of which can occur for several days after the cessation of treatment. (2)

Although glucagon and high dose insulin therapy is a well known treatment for beta blocker overdose (4), this was the first encounter we had both had with it during our training. Prescribing such large doses of insulin felt daunting, but with understanding about the pathophysiology and pharmacology, alongside detailed advice from NPIS, the management became clearer. This case would be of interest to other ICM doctors in training and it would hopefully provide confidence for them when encountering propranolol overdose in the future.

ACKNOWLEDGEMENTS

Work undertaken at QE Hospital Gateshead.
This patient gave consent for her case to be presented at this conference.

REFERENCES

1. Simple online Pharmacy. simpleonlinepharmacy.co.uk/online-doctor/anxiety/propanolol-10mg/ (accessed August 2022)
2. National Poisons Information Service, TOXBASE. toxbase.org/ (Accessed August 2022)
3. Sympathomimetics. In: TE Peck, SA Hill, M Williams. *Pharmacology for Anaesthesia and Intensive Care.* Cambridge University Press, 2008. Page 216.
4. Engebretsen KM, Kaczmarek KM, Morgan J, Holger JS. High-dose insulin therapy in beta-blocker and calcium channel-blocker poisoning. Clin Toxicol (Phila), 2011, 49:277-83.

Presentation 2

Authors: Alexandra Matheson, Louise Swan, Matthew Brown, Gemma Timms

TITLE

Adherence to national guidance for consent of blood transfusion in critical care patients

BACKGROUND

Blood transfusion is common in critical care patients, and consent may not be possible if they lack capacity. There are potential serious complications associated with blood transfusions. The 2020 guidelines from the expert advisory committee on the Safety of Blood, Tissues and Organs (SaBTO) state that patients must give valid consent prior to being given blood products or should be informed afterwards if they were unable to give informed and valid consent at the time.[1] Information related to transfusion should be included in the patient's discharge summary.[1] A previous audit completed within the trust found that 52% of patients in critical care did not have documented consent either before or after receiving blood products. This re-audit was performed to assess if staff education in transfusion processes and the transition to electronic records improved prospective and retrospective consent documentation.

METHODS

A retrospective case note review of all patients receiving blood products in three critical care units in Newcastle upon Tyne Hospitals Trust in the four-week period January-February 2022 in keeping with the previous audit. Standards were based on the SaBTO guidelines in 2020[1]. Data collection included whether patients had valid consent documented in their electronic notes, the clinical setting where consent was taken, and whether the transfusion was stated in the hospital discharge letter.

RESULTS

A total of 64 critical care patients received blood transfusions, but only 34% (22/64) had documented consent. One patient was informed retrospectively post-transfusion. Of those prospectively consented, 68% (15/22) were consented in preoperative assessment clinic, 14% (3/22) at the bedside and 18% (4/22) by the anaesthetist preoperatively. Elective surgical patients had higher rates of consent than emergency surgical or medical patients. Of the 53 surviving patients, transfusions were documented on the discharge letter in only 32% (17/53).

DISCUSSION

The rate of consent for blood transfusions is lower than the previous audit. The consent procedure in the preoperative assessment clinic (including patient information leaflets and orange stickers scanned into records) results in high levels of documented consent. Lower consent rates for non-elective patients may be explained by lack of knowledge of the transfusion consent process, the challenges of gaining retrospective consent, hard to find documentation or verbal consent which is not recorded.

Poor rates of documentation in the discharge letter may be due to lack of awareness about this requirement. Modifications to the critical care to ward summary template have been recommended to highlight when patients have received a transfusion, this will make it easier for information to be found for the discharge summary.
The trust is also moving to an electronic system for sampling and prescribing for blood products. This includes a prompt to gain consent if not obtained within the past 12 months.
We will repeat the audit following the implementation of these changes.

ACKNOWLEDGEMENTS

Aimi Baird, Newcastle upon Tyne Hospitals
Eleanor Harley, Newcastle University.
Previous audit authors: Emma Gray, Naomi Edgar, Samuel Bunn

REFERENCES

1. Department of Health and Social Care. Recommendations from the advisory committee on the Safety of Blood, Tissues and Organs (SaBTO) on patient consent for blood transfusion. [internet]. 2020 [cited 2022 Oct 25] Available from https://www.gov.uk/government/publications/blood-transfusion-patient-consent

Presentation 3
Author: Mgcini Ndiweni

TITLE

Tetanus, a case report on an uncommon disease.

CASE DESCRIPTION

A 77-year-old male farmer presented to Hospital with a history of trismus, limb weakness, and generalised muscular pain. He was initially managed in the acute medical unit. On physical examination, brisk deep tendon reflexes were found but the rest of his examination was otherwise normal. A survey of the patient's skin found scabbed wounds on the hands of varying ages. A clinical diagnosis of Tetanus was suspected, and tetanus antibody titres were requested. These subsequently were undetectable.

He was initially covered with IV antibiotics and a dose of tetanus immunoglobulin. The patient progressed to have worsening tetany and spasmodic pain. There was increasing concern about the patient's ability to protect his airway accompanied by an increasing oxygen requirement. The decision was made to transfer him to critical care for further treatment and monitoring. His oxygen requirement reached a FiO2 of 70% on Nasal high flow, CPAP was not tolerated, and the patient was Intubated. He initially required proning due to his oxygen requirement, his antibiotics escalated to cover for Hospital-acquired pneumonia, and he received a second dose of tetanus immunoglobulin.

His spasms were managed with a combination of oral and iv diazepam earlier on in his illness, this was switched to iv midazolam later. He developed an element of autonomic dysfunction with elevated blood pressure this was managed with oral/ nasogastric antihypertensives.

He did not develop spasms of the respiratory muscles which allowed for easier ventilation. He received a percutaneous tracheostomy to facilitate a respiratory wean. After 18 days in critical care, he was discharged having made a full recovery.

DISCUSSION

Tetanus is an infection caused by a toxin released from Clostridium tetani, a gram-positive bacillus(1, 2). The spores from this organism survive for prolonged periods on surfaces throughout the environment including in soil and animal faeces (1, 2).

The overall incidence of tetanus has decreased following the introduction of routine vaccinations in the 1960s (2, 3). The incidence of the disease is lower in developed nations with an average of fewer than 10 cases reported per year in England and Wales in the last 30 years (2, 3). However, it can have a mortality rate of 20-45%(2, 3). Being under-immunised remains a leading risk factor for susceptibility to infection with over 64-year-olds being at the greatest risk and making up most cases (3).

Management is focused on securing the patient's airway, passive immunisation to neutralise the unbound toxin, surgical debridement of the culprit wound, controlling muscle spasms and rigidity as well as counteracting the effects of automimic dysregulation (1, 3, 4).

Tetanus is an infrequent presentation to hospitals around the United Kingdom but remains an important diagnosis to identify early (3). It typically affects the elderly subset of our population which can potentially lead to management being complicated by pre-existing comorbidities. This case allows us to revisit the diagnosis and management of the condition.

ACKNOWLEDGEMENTS

University Hospital of North Tees Critical Care department
Dr Swadeep Vellore

REFERENCES

1. Ergonul O, Egeli D, Kahyaoglu B, Bahar M, Etienne M, Bleck T. An unexpected tetanus case. The Lancet Infectious Diseases. 2016;16(6):746-52.
2. Mumen Abdalazim Dafallah EAR, Omer Ali Mohamed Ahmed Elawad. Experience with Tetanus in a Tertiary Care Hospital in Sudan: A Retrospective Review. Emergency Medicine International. 2021;2021.
3. Gayatri Amirthalingam GG, Meera Chand, Norman Fry, Colin Brown, Joanne White, Charlotte Gower. Tetanus: advice for health professionals. In: England PH, editor. 2019.
4. Taylor AM. Tetanus. Continuing Education in Anaesthesia Critical Care & Pain. 2006;6(3):101-4.

Our 2022 Industry Sponsors

AVANOS

Raj Bashal
Account Manager
Raj.bashal@avanos.com

Office: +44 (0) 800 917 6585
Mobile: +44 (0) 780 104 5684

Fresenius Medical Care (UK) Ltd

Bill Constable
Business Unit Manager UK
Critical Care

Mobile: +44 (0)7557 633536
bill.constable@fmc-ag.com

www.freseniusmedicalcare.co.uk

BD

Diane Buckle
Sales Representative

Critical Care

Mobile: +44 (0)7970671070

Diane.Buckle@bd.com

Gilead

Fiona Duncan
Executive Therapeutic Specialist

Anti Infectives

Mobile: 07884314084

Fiona.Duncan@gilead.com

Hamilton Medical
Dennis Brown
Account Manager

Phone: +44 121 272 9303
Mobile: +44 7525 100362

dbrown@hamilton-medical.com

Premium Medical Protection
Stephanie Weatherall
Sales Manager

s.weatherall@premiummedicalprotection.com

Telephone: 0345 163 0053
Fax: 0207 806 0810

www.premiummedicalprotection.com

Kyowa Kirin International PLC
Tora Munnelly
Key Account Manager

Telephone: +44 (0)1896 664000

Direct/Mobile: 07917 919938

Tora.Munnelli@Kyowakarin.com

Teleflex

Elliott Leighton
Account Manager, North UK
Vascular Access

Mobile: +44 7881 252798
Customer Services: 01494 532 761
Office: 01494 532 741

Elliott.Leighton@teleflex.com
Website:www.teleflex.com

Vapotherm UK Ltd.
Ben Carlson-Oakes
Area Business Manager

Mobile: 07483 070353
bcarlson-oakes@vtherm.com

Simon Krievs
UK Sales Director

Mobile: 07920 597333
skrievs@vtherm.com

VAPOTHERM® UK Ltd

NEICS
NORTH OF ENGLAND
INTENSIVE CARE SOCIETY

NEICS Committee 2022

President
Uwe Franke

Past President
Ian Nesbitt

Treasurer
Dr Diane Monkhouse

Committee Members
Jonathan Brand
Sam Burnside
Steve Chay
Aylwin Chick
Jane Danby
Gavin Hardy
Chris Johnson
Joe Nevin
Suzie O'Neill
Alex Scott
Ola Shalaby

Trainee Committee Members
Amy Fox
Dominic Hutchinson
Andrew Kane

ACCP Committee Members
Alexandra Gatehouse
Sadie Diamond-Fox

Administrative Support
Anne Foster
Victoria Robinson

Delegate Booklet Winter 2022
Amy Fox