

# BAICN

British Association  
of Critical Care Nurses

## 34th Annual Conference

# Moral Courage: Meeting The Challenges of a Contemporary Healthcare System

## ABSTRACT BOOK 2019

Conference Partner:



16th & 17th September 2019  
Edinburgh International Conference Centre

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# Keynote Speakers

## S01: Salisbury Critical Care Team

**Helen Aldridge RN, BSc (Hons), PGCE**

### BIOGRAPHY

Helen has been a registered nurse for over 25 years, specialising in critical care and spinal injuries and is currently working as a spinal nurse specialist. She has a special interest in the care of the deteriorating patient and those with complex needs. She is passionate about education and is a member of the BACCN Wessex committee.



During the major incidents at Salisbury she was the lead nurse for critical care services, which required her to take on a multifaceted clinical and operational role.

**Dr James Haslam, Consultant Intensivist, Salisbury NHSFT**

### BIOGRAPHY

Dr James Haslam is a Consultant in Anaesthesia & Intensive Care Medicine at Salisbury NHS Foundation Trust. He has interests in ethics, mechanical ventilation and education.



Along with his Critical Care team, he diagnosed and cared for the critically ill patients during the Salisbury nerve agent incident.

**Dr Kate Jenkins, Clinical Psychologist, Salisbury NHSFT**

### BIOGRAPHY

Kate is a Clinical Psychologist, who specialised in working with patients with physical health problems when she completed her Doctorate at Southampton University.



She has worked at Salisbury District Hospital since 2006 and is the Lead Psychologist for ITU, Trauma Orthopaedics, Cancer and Palliative Care, as well as providing psychological assessment and interventions to patients with other physical health problems across the hospital.

In 2018 Kate took the lead in providing all the psychological interventions and support for staff at Salisbury District Hospital during the longest running major incident in NHS history.

### ABSTRACT

On the 4th March 2018, the peace and quiet of the beautiful medieval city of Salisbury was shattered. The local district hospital was thrown into the centre of what was to become the longest running major incident ever experienced in the NHS. This talk will present a timeline of those events, from the admission of the initial three casualties, to the international focus that followed when it transpired they had been poisoned with the Soviet-era nerve agent Novichok.

Told from the perspective of the lead ITU nurse, ITU Consultant and the unit's Clinical Psychologist, the talk will follow the theme of moral courage, highlighting some of the obvious and perhaps less obvious challenges that arose over the next three months.

On 30th June 2018, just when it was all deemed to be over, two further victims of Novichok poisoning were admitted to Salisbury District Hospital. The timeline will go on to revisit those themes of moral courage and how the medical, logistical and personal challenges evolved throughout the second episode and beyond.

## S02:

**Professor Dame Donna Kinnair, DBE, RGN, HV, LLB, MA, CMI is the Chief Executive and General Secretary of the Royal College of Nursing**



### BIOGRAPHY

The Royal College of Nursing (RCN) is the voice of nursing across the UK. The RCN promotes patient and nursing interests on a wide range of issues by working closely with the Government, the UK parliaments and other national and European political institutions, trade unions, professional bodies and voluntary organisations.

Working with the RCN Council and the Executive Team Donna is responsible for delivering the RCN's strategic and operational plans. Donna joined the RCN as Head of Nursing in 2015, she was then promoted and joined the RCN Executive Team to Director of Nursing, Policy and Practice in 2016, where her key role is to work with UK-wide RCN staff to drive and implement the future RCN professional nursing, policy and practice strategy.

Prior to joining the RCN Donna held various roles including Clinical Director of Emergency Medicine; Executive Director of Nursing and Director of Commissioning. Donna advised the PM's Commission on the future of Nursing and Midwifery in 2010 and served as nurse/child health assessor to the Victoria Climbié Inquiry.

## S03:

**Simon Edgar, MBChB, Director of Medical Education, NHS Lothian**



### BIOGRAPHY

Simon Edgar, MBChB, FRCA, MSc, FAcadMed, a consultant anaesthetist living and working in Edinburgh, is Director of Medical Education for NHS Lothian. As a clinician educator, he has held a number of positions in university, deanery, and health board settings. At NHS Lothian, he provides broad-ranging input into high-quality clinical education for undergraduates and postgraduate doctors in training.

Dr. Edgar's academic interests are in simulation for learning, systems improvement, and development of faculty. He believes passionately in the power of relationships, in the development of individuals to achieve their best, and in the strength of effective teamwork and joy in work. Dr. Edgar is a graduate of the Intermountain Healthcare advanced training program in leadership for health care delivery improvement, and he set up the Lothian Improvement Academy, mentoring the first cohort through the leadership program. He has a master's degree in medical education from Edinburgh University.

## S04:

**Dr Theresa Shaw**



### BIOGRAPHY

Theresa is the outgoing CEO of the Foundation of Nursing Studies (FoNS). She's passionate about nursing and enabling nurses to flourish as caring, knowledgeable and skilled practitioners. As CEO, she is proud of the work FoNS has contributed to this and to developing nursing practice and improving patient experience of care. Her doctoral research offers an important view into the impact of practice development and service improvement activity and ways in which such work can be effective in creating more person-centred practice and culture.

She has worked in the NHS for many years during which time her experience spanned clinical nursing, nurse education and practice development. Whilst her clinical expertise lies in the field of Cardio-thoracic Nursing, Theresa has worked with and supported nurses and nurse-led teams across the healthcare practice.

## S05:

**Christie Watson**



### BIOGRAPHY

Christie Watson is an award winning, bestselling writer. She has a special interest in nursing and mental health having spent twenty years working as a nurse, and holds an honorary Doctor of Letters for her contribution to nursing and the arts. She is Patron of the Royal College of Nursing Foundation.

Her first novel, *Tiny Sunbirds, Far Away*, won the Costa First Novel and Waverton Good read awards and her second novel, *Where Women Are Kings*, also internationally achieved critical acclaim.

Her non-fiction *The Language of Kindness*, was published in 2018 and was a number one Sunday Times Bestseller. It was a Book of the Year in *The Evening Standard*, *New Statesman*, *The Times*, *The Guardian* and *The Sunday Times*. It has been translated into 23 languages, and spent five months in the Sunday Times Top Ten Bestseller lists. It is currently being adapted for theatre and television.

# Workshop Abstracts

## W01: The Safe Use of Injectable Medicines in Critical Care

SPONSORED BY:



**Gillian Cavell, Emeritus Consultant Pharmacist. Medication Safety Specialist. MSc, RPharmS Faculty Fellow**

This workshop will consider how the increased usage of Ready-to-Use Medicines in the Critical Care unit can promote improved Reliability, Reproducibility, Reduces Risk and Releases time to care for patients.

## W02: Diabetic Emergencies in Critical Care

**Grainne McCormack, Oxford Brookes University**

### Introduction

The aim is to gain a better understanding of the physiological processes of diabetic emergencies in critical care. The clinical presentation and management will be explored whilst evaluating the use of evidence based guidelines to gain a deeper understanding of clinical management.

### Learning Objectives

- Understand the differences between Diabetic Ketoacidosis (DKA) and Hyperosmolar Hyperglycaemic State (HHS)
- Explore pathophysiology of DKA and HHS
- Explore the clinical presentation and management of both
- Look at evidenced based guidelines to guide clinical practice

### Teaching Methods

- Face to face
- Use of PowerPoint Presentation

### Audience

Group work to apply evidence based guidelines to a clinical scenario (If time allows)  
Open discussion about experiences, managing these patients outside the ICU.

### Target Level of Practice

- Beginner
- Revision for other experienced staff

### References

Dhatariya, K. Savage, M. (2013) Joint British Diabetes Inpatient Care Group: The Management of Diabetic Ketoacidosis in Adults Third Edition. Available at <https://www.diabetes.org.uk/professionals/position-statements-reports/specialist-care-for-children-and-adults-and-complications/the-management-of-diabetic-ketoacidosis-in-adults> (accessed 26/02/19).

Gosmanov, A. Oâ€™ Gosmanova, E. Kitabachi, A. (2000) Hyperglycaemic Crises: Diabetic Ketoacidosis and Hyperglycaemic Hyperosmolar State NCBI Bookshelf. A service of the National Library of Medicine, National Institute of Health. Available at: <https://www.ncbi.nlm.nih.gov> (accessed 19/02/2019).

## W03: What lessons can we learn from patient experience?

**Melanie Gager, Royal Berkshire NHS Foundation Trust**

### Introduction

Hearing the patient voice can enable and empower learning to humanise healthcare in the critical care setting and potentially unleash the power for staff sustainability

Our vision is to share the dynamic of hearing the patient story. Our experience of sharing this with our affiliated university critical care Masters programme demonstrated it is not only about hearing the patient experience but also generating energy and direction leading to quality improvement and changes in practice. It unleashes the power to re-energise and re-connect healthcare professionals with their core beliefs and values. "In the job as an intensive care nurse "some of my days are so stressful and draining and sometimes I wake up in the night thinking about my patients on my days off. I often think 'why do I do this job?' and 'is it worth it?' and James' talk today made everything feel worthy and reminded me why I became a nurse" Critical Care Course Nurse feedback March 2019

### Learning Objectives

- Learn the importance of giving the patient a voice through story telling
- Recognise that hearing patient experience highlights areas for quality improvement and changes in practice
- Recognise that story telling is a strategy to reconnect

healthcare professionals to their core beliefs and values

### Teaching Methods

- Facilitation of the group to;
- Briefly review the current literature and thinking
- Consider the ways to capture patient experience in the critically ill cohort
- Listen to a patient experience of out of hospital cardiac arrest; ICU; rehabilitation after critical illness; impact on self and family
- "So what?" exploration - leading to change in practice
- Reconnection to staff core beliefs and values

### Audience

The facilitator will aim to generate a safe, social space whereby honest and open dialogue can take place throughout the session. The psychological safety of the speaker and delegates is key and the facilitator is trained to identify, support and signpost any affected by this discussion, at the time and throughout conference

### Target Level of Practice

All

### References

Wilson M, Beesley S, Grow A, Rubin E, Hopkins R, Hajizadeh N and Brown S (2019) Humanizing the intensive care unit; Critical Care (23:32) Available at: <https://doi.org/10.1186/s13054-019-2327-7> Accessed March 25th 2019

National Institute for Health and Care Excellence (2017) Rehabilitation after Critical Illness in adults (NICE Quality Standard 158) Available at: <https://www.nice.org.uk/guidance/qs158>. Accessed March 25th 2019

## W04: Linet Lateral Rotation Beds in Neuro Intensive Care - Staff Benefits

SPONSORED BY:



**Linda Monk, University Hospital Southampton Foundation Trust**

### Aim

To evaluate the use of Linet lateral rotation beds and their benefit to staff in a Neuro Intensive Care Unit

### Background

To avoid hospital acquired pressure damage, very high risk patients are turned 2 hourly according to guidelines (NICE, 2015). This requires 3 - 5 persons per turn taking on average 20 minutes. Using Allocate SafeCare software providing visibility of Care Hours Per Patient Per Day (CHPPD) demonstrated a deficit in actual nursing time

to deliver a regime of 2 hourly turns.. The nursing requirements were correct according to establishment but the physical demand on moving and handling were evident on reviewing absence. It was hypothesised that lateral rotation beds could relieve workload and thus reduce the CHPPD deficit by reducing the staffing requirement during 2 hourly turns and still use same staffing requirements 4 hourly. The beds support the turning process thereby reducing the physical demand on staff by 50%. Linet was approached and a 12 month service improvement project commenced August 2017.

### Main Findings/Results/Discussion

Findings not only demonstrated a reduction in musculoskeletal absence, a reduction in workload and CHPPD deficit but increased substantive staff working via the Staff Bank with a related financial benefit of reducing high cost agency. Associated with this, positive feedback from staff showed an improvement in morale, recruitment and retention.

### Conclusion/Future Application

A report of findings was presented at meetings with Care Group Management, Divisional Leads and Trust Leads for Total Bed Management, Procurement and commercial department. The purchase was agreed by all members and signed off by Head of Procurement. This is the first project that has demonstrated a reduction in workload and related benefits associated with Linet bed use. The project report, valued at Â£20,000, is being considered for commercial use with the potential for University Hospital Southampton becoming a global reference site for the Linet.

### References

National Institute for Health and Care Excellence. (2015) Pressure Ulcers. NICE guideline [CG179]. Available at: [nice.org.uk/guidance/qs89](https://www.nice.org.uk/guidance/qs89) [Accessed: 31 March 2019]. Allocate. (2019). Healthroster Software - SafeCare. [online]. Available at: [www.allocatesoftware.co.uk/solutions/nursing-care-workforce-software/safecare](http://www.allocatesoftware.co.uk/solutions/nursing-care-workforce-software/safecare) [Accessed 31 March 2019].

## W05: The ABC of Obesity in Critical Care

**Louise Caroline Stayt, Oxford Brookes University**

### Introduction

Twenty six per cent of adults are classified as obese (National Health Service (NHS) Digital, 2018). It is estimated that over a third of patients in critical care settings are obese and 7% morbidly obese. Obesity is associated with multiple co-morbidities and pathophysiological derangements that confound and

complicate acute and critical illness. Studies have suggested that patients who are obese may be more susceptible to inflammatory processes that often lead to organ dysfunction (Shashaty and Stapleton, 2014) which has implications for the associated evidence based nursing care and management. This teaching session aims to explore the pathophysiology of obesity and the implications on the management of the airway, breathing and circulation during episodes of critical illness.

#### Learning Objectives

By the end of the session the learner will be able to:

1. Describe and discuss the pathophysiology of obesity and metabolic syndrome
2. Discuss the clinical implications of obesity on airway, breathing and circulation in the critically ill
3. Discuss evidence based management strategies of critically ill, obese patients

#### Teaching Methods

This session will include a mixture of didactic delivery of key concepts and group discussion and reflection activities

#### Audience

The audience will be invited to reflect on their own practice and share their clinical experiences within small groups. There will be discussion points introduced throughout the presentation where the audience will be invited to share their thoughts

Target Level of Practice: All

#### References

NHS Digital (2018) Statistics on Obesity, Physical Activity and Diet - England, Available at: <https://digital.nhs.uk/data-and-information/publications/statistical/statistics-on-obesity-physical-activity-and-diet/statistics-on-obesity-physical-activity-and-diet-england-2018> Accessed 30/3/2019

Shashaty MGS, Stapleton RD (2014) Physiological and management implications of obesity in critical illness. *Annals of the American Thoracic Society*. 11(8): 1286-1297

## W06: Continulus: Harnessing Digital Technology to Teach the World

SPONSORED BY:

**continulus**

**Eoghan Colgan, Founder, Continulus**

Be creative, think BIG and change the world. Continulus

founder, ED doctor and podcaster, Eoghan Colgan shares his journey and advice to help you realise your vision. Plus Eoghan will share his top 10 tips to get you podcasting today.

## W07: Delirium in the ICU: The Latest Evidence

**Michelle Treacy, University of West London**

Introduction: Delirium in the Intensive Care Unit (ICU) is a major concern, with a predicted 30-80% of patients developing delirium. Delirium is defined as an acute brain dysfunction, characterized by a change in cognitive level, the patient may exhibit inattention, disorientation, impaired memory, reduced conscious level, emotional changes and perseveration (Ramoo et al., 2018). Studies have shown a significant relationship between ICU delirium and both poor - short and long term patient outcomes (Salluh et al., 2015), despite this delirium is often overlooked, misdiagnosed and unrecognised in the ICU. In September 2018 the international guidance for the prevention and management of pain, agitation/sedation, delirium, immobility and sleep disruption in adult patients in the ICU, were published (Devlin et al., 2018). The aim of this session is to present the latest recommendations in the prevention, detection and management of delirium from Devlin et al., (2018).

#### Learning Objectives

By the end of the session, participants will be able to:

- Recognize the delirium risk factors, both predisposing and precipitating, allowing practitioners to identify those patients who may be at an increased risk of delirium.
- Identify the validated method of assessment, using the Confusion Assessment Method - ICU tool.
- Discuss the management interventions; in particular the non-pharmacological initiatives.

#### Teaching Methods

A visual display will be used via imagery on a projector. The session will use imagination techniques to provide insight into how it feels to be an ICU patient. The risk factors, both predisposing and precipitating will be explained, allowing practitioners to identify those patients who may be at an increased risk of delirium via presentation. The validated method of assessment, using the Confusion Assessment Method - ICU tool and the management interventions; both pharmacological and non-pharmacological. The focus will be on the non-pharmacological prevention and management of delirium, the session will provide nurses with the latest evidence and give examples of how to implement these initiatives in practice. This session will be interactive,

with the use of Poll Everywhere, which allows engagement with the audience in real time and ensures participation. Barriers to assessing delirium will be explored; following participation feedback.

#### Audience

This interactive session, participants will be asked to imagine a certain situation, to help consider what it is like to be a patient on ICU. Poll Everywhere allows engagement with the audience in real time and ensures participation, following feedback from the poll everywhere via participants using their devices, a discussion will be facilitated on the barriers to assessing delirium.

#### Target Level of Practice

The session will be aimed at beginners to ICU, and may act as a refresher for other levels of practitioners in the ICU.

#### References

Devlin, J. W. et al. (2018) "Clinical practice guidelines for the prevention and management of pain, agitation/sedation, delirium, immobility, and sleep disruption in adult patients in the ICU", *Critical Care Medicine*, 46(9), pp. e825-e873. doi: 10.1097/CCM.0000000000003299.

Ramoo, V., Abu, H., Rai, V., Singh, S.K.S., Baharudin, A.A., Danaee, M. and Thinagaran, R.R.R. (2018) "Educational intervention on delirium assessment using confusion assessment method-ICU (CAM-ICU) in a general intensive care unit", *Journal of Clinical Nursing*, 27 (9-10), pp. 4028-4039.

## W08: NHS Blood Transplant

SPONSORED BY:



**Blood and Transplant**

**Phil Walton, NHSBT**

Through demonstrative participative simulation (forum theatre), we will be showcasing the 'deemed' consent/authorisation conversations in relation to new UK opt-out legislations. Audience participation will be invited to direct the conversations. So that the things people are most keen to understand can be actively explored and generate further discussion and understanding.

## W09: Critical Care Nurse Education - An Update on the Development of a Competency Framework - Specialist Competencies

**Samantha Cook, Critical Care Nurse Education**

### Forum

#### Introduction

This workshop will provide an update on and act as a platform to discuss new specialist competency sets from the Critical Care Networks (CC3N) and how those already launched are being utilised in practice. Version 2 of the National Competency Framework was published in 2015i.

#### Learning Objectives

- Provide an overview of the competency framework and progress on Specialist Competencies
- Facilitated discussion regarding development of specialist competencies
- Feedback from participants on use of competencies / future options for development

#### Teaching Methods

Short PowerPoint presentation then group work with audience participation and feedback.

#### Audience

Audience will be placed in groups to discuss their practice and how the specialist competencies are being utilized in both educational and hospital settings. Will be asked questions relevant to the development of the competencies and will provide some feedback.

#### Target Level of Practice

All will be encouraged to participate and express their views.

#### References

iCC3N (2013) National Competency Framework for Adult Critical Care Nurses. Available at: [www.cc3n.org.uk](http://www.cc3n.org.uk)

## W10: Initiatives to aid staff wellbeing in our #incredibleICU

SPONSORED BY



**North Bristol  
NHS Trust**

**Morwenna Maddock, Senior Staff Nurse, North Bristol NHS Trust**

Southmead Intensive Care Unit is a Major Trauma Centre covering a large part of the South West of England, providing care for multiple specialities in a purpose built 48-bedded unit.

Alongside training, health and wellbeing support is vital to ensure our staff can meet the challenges of working in our busy ICU department. In this seminar, we will be sharing the initiatives we have in place to empower staff and the impact this has had on recruitment and retention.

## C01: BACCN Dragons Den... Now and Then

**Stephen Cutler, Guys and St. Thomas' NHS Foundation Trust**

In September of 2018 I had an idea of teaching 500 members of staff safe transfers with the use of video. The initial idea was to have the investment of £500 from the BACCN to purchase a GoPro, however having won and having the freedom of spending the funds myself directly I gained advice from the Simulation Techs as this is one of their areas of expertise. They advised me to buy a DSLR which could shoot film as well as take high quality pictures. Having purchased all of the equipment and having the many ideas of what I was going to do with this I then hit a personal stumbling block of my farther passing away. With this delay of being off work for around 3 months I returned only to find myself amongst the winter bed pressures and many of the transfer group unable to engage in the filming of the transfer video. However, at the beginning of April 2019 we finally filmed tool. Due to the file being so large one of the main concerns which we have encountered is storage of the film. Therefore we have approached the trust in order to store it on the Trustole site for our staff to access. We are currently in the process of editing the film in order to publish to staff in the next few months.

## C02: Early mobilisation in mechanically ventilated patients: a systematic integrative review of definitions and activities

**Catherine Clarissa, Lisa Salisbury, Sheila Rodgers, Susanne Kean, Scottish Critical Care Interdisciplinary Research (SCCIRL) Group**

**Background:** Current evidence suggests that early mobilisation is effective in improving mechanically ventilated patient outcomes. However, a widely agreed definition of early mobilisation in mechanically ventilated patients (EM-MV) is not available and researchers take different approaches to operationalise it in their studies. **Aim:** To systematically explore the definitions and activity types of EM-MV in the literature. **Methods:** A systematic integrative review was conducted using Whitemore and Knaf's (2005) framework. Six databases were searched (CINAHL, MEDLINE, EMBASE,

PsycINFO, ASSIA, and Cochrane Library) to obtain studies from 2000 to 2018. A hand search of grey literature and reference lists of included studies was performed. The methodological quality of included studies was assessed using the Critical Appraisal Skills Programme (2016). Quality assessment of studies and data extraction were performed independently by two reviewers who then came together for discussion and agreement. For the included studies, an inductive and data-driven thematic analysis (Braun and Clarke, 2006) was undertaken. **Results:** Seventy-six studies were included and four themes developed: (1) non-standardised definition, (2) contextual factors, (3) negotiated process and (4) collaboration between patients and staff. The first theme shows the absence of a standardised definition of EM-MV across studies. The remaining themes indicate the diversity of EM-MV activities depending on patients' characteristics and ICU settings; the negotiated decision-making process between patients and staff; and the interdependent relationship between patients and staff during implementation.

**Conclusions:** Our findings highlight that there is no agreement on the definition and activities considered as EM-MV in the literature. We suggest that a consensus-based EM-MV definition is required to allow a shared understanding and to advance research and practice on this topic.

**References:**

Braun, V. and Clarke, V. (2006) 'Using thematic analysis in psychology', *Qualitative Research in Psychology*, 3(2), pp. 77–101. doi: 10.1191/1478088706qp063oa.  
Critical Appraisal Skills Programme (CASP) (2016) CASP CHECKLISTS. Available at: <http://www.casp-uk.net/> (Accessed: 13 June 2016).  
Whitemore, R. and Knaf, K. (2005) 'The integrative review: Updated methodology', *Journal of Advanced Nursing*, 52(5), pp. 546–553. doi: 10.1111/j.1365-2648.2005.03621.x.

## C03: An integrative review of the effect of family-centred rounds in intensive care on patient outcomes

**Dr Claire Kydonaki, Scottish Critical Care Interdisciplinary Research (SCCIRL) Group**

**Introduction:** Involvement of family members in the ward rounds is a novel but under-researched Patient and Family Centred Care (PFCC) intervention in adult ICUs with limited evidence on the impact it has on patient and family-centred outcomes.

**Aim:** To extend the knowledge and understanding of PFCC by synthesising empirical evidence of family-centred rounds (FCR) within the adult ICU setting and their impact on patient and family care.

**Methods:** An integrative review methodological framework was employed, permitting the inclusion of all research designs. A systematic search of the following databases was conducted: MEDLINE; CINAHL; PsycINFO; Cochrane Library; Web of Science Current Contents Connect; Web of Science—Core Collection; The Joanna Briggs Institute EBP Database; ProQuest Sociological Abstracts; and ProQuest Dissertation and Theses Global, Embase. Primary research in adult ICUs was included. We excluded paediatric ICUs and end-of-life care. Study quality was assessed by the Mixed Methods Appraisal Tool.

**Results:** Twelve articles met the inclusion criteria and were included in the review. Most studies were from the USA and Canada since 2003, which signifies the upcoming trend of research in FCR. Most studies used surveys as their data collection tools. Although there was a positive attitude towards the use of FRC in ICU from families' perspective, and medical staff but less from staff nurses, the quality of the studies was poor and evidence does not report on any patient or family-related outcomes. Main limitations were the low response rate in the surveys, the single site studies and high risk of selection bias.

**Conclusions:** Future research should focus on longitudinal patient and family-centred outcomes including mental health outcomes, and on qualitative data to understand the processes, barriers and facilitators to implement FCR in ICU.

## C04: Real Time Measurement of Work-Related Stress & Wellbeing in Critical Care Nurses: A Feasibility Study

**Louise McCallum, University of Dundee, Nursing & Health Care School, University of Glasgow, Prof. Martyn Jones, University of Dundee, Dr Jan Boehnke, University of Dundee, Dr Kenny Morrison, University of Dundee, School of Medicine, Ninewells Hospital, Dundee and Dr Janice Rattray, University of Dundee**

**Background** Real time data collection, using electronic diaries has not been previously applied in the study of work-related stress in critical care nurses (CCNs). Real-time data collection is advantageous, providing a detailed view on

change over time, collecting data from participants at prompted intervals within their natural setting, avoiding the problems of retrospective data collection, and increasing the ecological validity of the data (Jones & Johnston, 2011).

**Aims**

1. To develop an electronic diary device to collect real-time data on work-related stress in CCNs
2. To test the feasibility and acceptability of the device and study protocol among CCNs.

**Methodology**

Measures that captured CCN work-related stress and wellbeing in real-time were programmed into a handheld electronic diary; a personal digital assistant (PDA) device with a diary software programme called 'Pocket Interview' (Morrison et al, 2009). The programme had four elements: 'shift-start', 'standard timed intervals', 'shift-end' and 'clinical incident(s)'. Participants were prompted to enter data at 90-minute intervals over a shift, and data collection extended across five consecutive shifts. Written consent was sought and data anonymised. Participants provided feedback on the acceptability of question items and degree of intrusion on operational nursing activities.

**Results**

The feasibility study was implemented on an ICU at a tertiary referral centre. Seven CCNs participated. Completion rates were excellent, 227 of 280 (81.1%) possible diary observations were collected. Diary content including question items and schedule structure were acceptable and PDAs were minimally intrusive to CCNs activities. The study protocol performed optimally across a range of conditions, including day shifts, night shifts, redeployment to other clinical areas and PDA malfunction.

**Conclusion**

Electronic diaries are an acceptable method for collecting real-time data on work stress and wellbeing in CCNs. Feasibility and acceptability testing of PDAs is key to effective diary development. The main study is underway.

**References**

Jones, M. & Johnston, D. (2011) Understanding phenomena in the real world: the case for real time data collection in health services research. *Journal of Health Services Research & Policy*, 16(3), pp. 172-176.

Morrison, K., Ricketts, I., Jones, M., Johnston, D., Pitts, N. & Sullivan, F. (2009) A secure electronic diary and data collection tool, p. 1-4. Available at: [https://www.academia.edu/16447624/Pocket\\_interview\\_A\\_secure\\_electronic\\_data\\_collection\\_and\\_diary\\_tool](https://www.academia.edu/16447624/Pocket_interview_A_secure_electronic_data_collection_and_diary_tool)

## C05: A mixed methods study exploring the reasons for early unplanned hospital readmission among ICU survivors

**Dr Lisa Salisbury, Scottish Critical Care Interdisciplinary Research (SCCIRL) Group**

Introduction: Patients admitted to Intensive Care (ICU) have high rates of pre-existing illness<sup>1</sup> and many suffer new physical, psychosocial and cognitive issues as a result of critical illness. We recently found that 25% of ICU survivors require early unplanned hospital readmission (within 3 months of hospital discharge) <sup>2</sup>. Understanding the underlying factors may inform the development of new support services and interventions.

Aim: To identify risk factors for early unplanned hospital readmission among ICU survivors

Methods: A retrospective cohort study of all Scottish ICU survivors requiring early unplanned hospital readmission between 2000 and 2013, including data linkage across multiple national databases. We conducted concurrent qualitative interviews and confirmatory focus groups with 58 ICU survivors and family members who had experienced early unplanned readmission.

Findings: Cohort-level regression analyses identified pre-existing illness as a stronger risk factor for readmission than the acute or admitting illness. Among patients without pre-existing illness, acute illness was a stronger risk factor. However, a risk prediction model only had moderate discriminant ability i.e. was unlikely to identify those at risk of early unplanned readmission.

Qualitative analyses identified ten patient and system-level issues which participants felt were associated with readmission. Patient-level issues comprised: multi-morbidity and polypharmacy; psychological problems; poor mobility; fragile social support and problems with specialist equipment. System-level issues comprised: hospital discharge planning; communication between acute and community-based care; goal setting; psychological support and pharmacy support. Often a complex picture of multiple health and psychosocial factors influenced readmission.

Conclusions: Pre-existing illness is a risk factor for early unplanned readmission. Complex health and psychosocial issues also contribute to readmission risk. Further work is required to develop (a) screening tools to identify those at risk and (b) interventions and service developments to reduce readmission rates.

<sup>1</sup> Griffith DM, Salisbury LG, Lee RJ et al. Determinants

of health-related quality of life after ICU: importance of patient demographics, previous comorbidity, and severity of illness. *Crit Care Med* 2018; 46:594-601.

<sup>2</sup> Lone NI, Gillies MA, Haddow C et al. Five-year mortality and hospital costs associated with surviving intensive care. *Am J Respir Crit Care Med* 2016; 194:198-208.

## C06: Understanding Brief Illness Perception Among Cardiac Patients: A Preliminary Study

**Sukhbeer Kaur Darsin Singh, Universiti Malaysia Sabah**

Background: Illness perceptions involve personal beliefs that patients have about their illness and may influence health behavior considerably. Illness perception, constitute the beliefs about the typical complaints that belong to the illness, beliefs about the course, the consequences and the extent in with a disease is controlled.

Aim: This preliminary study evaluates the understanding of illness perception among cardiac patients and correlations of each of the items.

Method: A preliminary study was conducted using the on Brief Illness Perception Questionnaire (BIPQ) in a tertiary hospital among 40 cardiac patients. Ethical approval prior to conduction of the study was obtained from the institution ethical committee. There are 9 items in the BIPQ with 0-10 response scale except for the ninth item about causal factors which is an open ended item. Items 1 to 5 assesses on the cognitive illness perception which comprises of consequences, timeline, personal control, treatment control and identity. Item 6 and 8 are on emotional response and item 7 is on coherence.

Results: The overall mean score of the 8 items of BIPQ was 7.04 (1.07) with the highest mean for item 4 on treatment control and item 6 on personal control at 8.02 (0.92) and 7.03 (1.77) respectively. While the lowest mean was item 7 on understanding at 6.63 (1.83). The causal factor for the open ended question was mostly on consumption of fatty food intake, sedentary lifestyle and stress at work. Perceiving personal control was significantly being affected by perceiving treatment control for the cardiac disease ( $r=0.50$ ) and being concerned about their cardiac symptoms was significantly related to perceiving consequences of the disease ( $r=0.54$ ), perceiving identity ( $r=0.75$ ) and perceiving emotional control ( $r=0.67$ ). Perceiving emotional control on their symptoms was significantly related to perceived consequences on cardiac disease ( $r=0.51$ ), perceived identity ( $r=0.53$ ) and perceived

concern on cardiac disease ( $r=0.67$ ).

Implications for Practice: The results shown significant correlations with relevant outcomes measures. Thus, it is useful in clinical practice to assess and potentially modify patient's perceptions on understanding, emotional control, personal control, consequences and perceived concerned over their cardiac disease.

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## C07: Improving the Patient Experience for Critically Ill Obstetric Patients

**Claire Wilcox, Emma Gornall, Lancashire Teaching Hospitals**

Purpose: A traumatic experience and critical care stay can be overwhelming and can affect maternal bonding, psychological anxieties and adjusting to parenthood. By focusing on 3 areas; zero separation, infant feeding and psychological support we hope to enhance the care given to new mothers and minimise a negative impact on their experience.

Background/Significance: MBRRACE-UK (2018) states between 2014-2016 9.8 women per 100,000 died during pregnancy or up to 6 weeks after childbirth. It is recognised woman with multiple health problems and increasing in age are giving birth and more of these women are requiring critical care either during pregnancy or post-partum.

Method: A multidisciplinary working group was established and benchmarked our standards against the recommendations published by ROCA in August 2018. Training has been implemented to ensure a midwife with critical care skills are on each shift. Critical care nurses have cross unit working to understand the needs of these patients immediately post-partum. Safeguarding and consent has been addressed regarding maintaining baby safety during transfers and maintaining lactation of the unconscious patient.

Results: We have reduced zero separation by escorting babies to critical care, including babies from neonatal ICU, or escorting Level 2 critical care patients to NICU.

Critical Care Nurses are now supported to maintain lactation by the Consultant lactation Midwife with advice as necessary from ICU pharmacists. Psychological support has improved due to these changes and the development of memory boxes and automatic referrals for all patients to our clinical psychologist and critical care follow up clinic.

Conclusion: Through an improved working relationship with our delivery suite we have developed a multi-faceted approach to improving the experience of obstetric patients requiring a critical care stay

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## C08: Family Bereavement Support in Adult Intensive Care

**Dr Wendy Walker, University of Wolverhampton, Dr Nikolaos Efstathiou, University of Birmingham, Dr Brandi Vanderspank-Wright, University of Ottawa, Professor Alison Metcalfe, Sheffield Hallam University**

Aim: To present the process and outcomes of a systematic literature review related to family bereavement support in adult intensive care.

Background: Despite medical progress in intensive care, a substantial number of critically ill patients die. Good end-of-life care includes pre- and post-death support for the grieving and bereaved family. Bereavement in intensive care can be challenging, and the psychological impact for experiencing families is well recognized.

Method: A systematic review and narrative synthesis. The Cochrane and Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines were followed to produce and report a systematic and rigorous review. The review protocol was registered with PROSPERO; an international prospective register of systematic reviews. Databases searched were: Medline, CINAHL Plus, PsycINFO, Web of Science and EMBASE. Inclusion and exclusion criteria were applied to inform study selection. The electronic search was supplemented by hand-searching the reference lists of all retrieved papers.

A systematic search was completed. Included studies were appraised using the AXIS appraisal tool for surveys (Downes, Davis and Kraemer, 2016) and relevant Critical Appraisal Skills Programme tools (CASP, 2018). Data analysis was undertaken to develop a preliminary narrative synthesis of study findings. Each stage of the systematic review process involved a minimum of two reviewers.

**Findings:** Fourteen research papers published 2014-2018 formed the review. This comprised five international surveys reporting the status of ICU bereavement support, and nine studies examining the perceived efficacy of a single bereavement support intervention, of which most reported positive outcomes. Internationally, the most common bereavement support practices were: a condolence letter or sympathy card, a phone call to the family, a routine meeting with medical staff and a bereavement brochure.

**Implications for Practice:** Bereavement support in intensive care needs further exploration with experiencing families and staff. A clearer understanding of the scope, nature and impact of support is essential to for evidence-informed bereavement care practice, appropriate to the needs of grieving families.

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## C09: Do Critical Care Outreach Teams Improve Patient Outcomes?

**Yvonne Fehily, Galway University Hospital**

**Background:** The research addresses if Critical Care Outreach Teams (CCOT) improve Patient Outcomes.

**Aim:** The study looked at ICU/HDU admission rates, ICU/HDU readmission rates, cardio-respiratory arrest rates and hospital mortality rates prior to the implementation of the CCOT (June - November 2016 inclusive) were compared to the post implementation of the CCOT (June - November 2017 inclusive). The discharge outcome on the patients reviewed by the CCOT were also reviewed and presented.

**Method:** This research is a longitudinal retrospective cohort study of patient records. The inclusion criteria are all patients that were admitted to the hospital during the Pre CCO-study period and all patients admitted to the hospital Post CCO study period. In order to examine patients to most likely benefit from the CCO intervention, paediatric patients were excluded, the nurses on the CCOT are not paediatric trained and only reviewed paediatric patients accompanied by an ICU doctor. It is a single site study in a University teaching hospital in the West of Ireland. The sampling strategy used is a non-probability convenience sample. For the purpose of this study the Health Informatics manager extracted data relating to ICU/HDU admissions and readmissions for the relevant 6-month period pre and post CCO from the Metavision Clinical Information System. Data related to Hospital mortality rates and discharges were obtained from the PAS - Patient Administration System. Data related to Cardiac arrests were obtained from the Resuscitation Officer who routinely gathers this data for hospital statistical purposes. Data was analysed by the researcher using the statistical package for social science (SPSS) version 24. . Statistical analysis was performed using the Wilcoxon non-parametric two related samples to test the null hypothesis. A p-value of <0.05 was used for all tests to confirm statistical analysis. A p-value <0.05 indicates a significant difference while a p-value >0.05 indicates no significant difference. Ethical approval was sought from the local Clinical Research Committee and approval was granted.

**Results:** The introduction of the CCOT was not associated with any significant differences in ICU/HDU admission rates or readmission rates to ICU/HDU but was associated with a significant difference in hospital mortality rate and cardiac arrest calls. Hospital mortality rates fell from 1.83% to 1.6% per 1000 hospital admissions (p <0.047). This is a reduction in hospital mortality of 11.1%. Cardiac arrest calls fell by 29.5% post implementation of CCO.

**Implications for Practice:** Our CCOT remains in place. The plan is to roll out CCOT's nationally as we are the first team in Ireland to have initiated this type of team. We are currently awaiting for all the team to become ANP's as we currently have only 1 ANP on our team. Ideally the future plan is to progress the current CCOT to 24hours 7 days a week as there is less support throughout the entire hospital at night. The CCOT proves to be a good solution to the problem which should ultimately eliminate pressure on critical care beds. Finally, further research is needed to further evaluate the impact of CCOT's.

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## C10: Introduction of a Sedation Hold (in Ventilated Patients) Within 4 hours of Admission to ICU

**Jennifer Howie, Sharon Hutcheon, Stephanie Frearson, Crosshouse Hospital**

**Purpose:** Our aim was to introduce a sedation hold on all eligible ventilated patients within 4 hours of admission to ICU and to achieve 80% compliance by December 2018. By doing this it was hoped that we could reduce the incidence of delirium in our patient population.

**Background/Significance:** In the ICU, sedatives are provided for patient comfort however their use has been strongly associated with harm and the occurrence of delirium [1]. It has been suggested that delirium in ICU leads to prolonged mechanical ventilation, prolonged ICU length of stay and increased hospital mortality [2]. Research has shown that the introduction of sedation protocols and the reduced exposure to sedative medications improves patient outcomes [1].

**Method:** In April 2018 we embarked on a Quality Improvement Project to reduce the use of sedative medication in ICU. The aim was to introduce a sedation hold within 4 hours of admission on all eligible ventilated patients. Using the model for Improvement we devised a driver diagram and employed PDSA methodology to test ideas for change.

Phase 1 - Education and awareness sessions  
Phase 2 - Introduction of whiteboards and crib sheet  
Phase 3 - Monitoring and measuring compliance

**Results:** With only 11 months data to date our project is still very much in its infancy. Our results demonstrate we have had periods of good compliance, nevertheless due to a high acuity of patients and business of the unit we have had periods where it has been sub optimal. Since August we have revisited our exclusion criteria and modified our crib sheet as we were perhaps trying to achieve the unachievable.

**Conclusion:** Currently our compliance with the protocol is approximately 77% therefore definite room for improvement has been identified. However on a more positive note we have been able to demonstrate a reduction in our sedative use on a day to day basis resulting in a financial gain.

The next step in our project is to explore the link between reduced sedative use and it's impact on delirium. We are hopeful that this will show reduced delirium in our patient population and we will monitor this by using CAM-ICU.

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## C11: Detecting Latent Threats in Unexpected Difficult Airways

**Stephen Cutler, Guys and St. Thomas' NHS Foundation Trust**

**Purpose:** The purpose of this project was to improve patient safety within the Critical Care Unit (CCU) in a large London teaching hospital through the use of in-situ simulation. Using an Unexpected Difficult Airway (UDA) simulated scenario, we set out to increase staff knowledge and understanding of the management of UDA's. the intended learning objectives included; understanding the UDA algorithm (Difficult Airway Society Frek et al 2015), understanding how Human Factor Skills (HFS) impact on UDAs, and identifying potential latent threats within the clinical environment.

**Background/Significance:** UDA's are significant clinical events, are life threatening for the patient and stressful for clinical staff worked (Cook et al 2011). As it is a rare event, the baseline understanding of the algorithm and equipment used to treat it are largely unfamiliar to the CCU staff. The hospitals critical care service comprises of multiple units situated on 11 floors across 2 sites. Staff rotate across the multi-site environments and have variable floorplans and equipment  
The 4th National Audit Project (Cook et al 2011) gave information on the major complications and poor outcomes of airway management during anaesthesia. It highlighted the need for greater understanding of HFS such as planning, communication.  
In situ simulation is deemed desirable for this type of project as it uses the naturalistic environment, with real

equipment and team's utilising organizational processes enabling assessment of team performance against these systems (Hamman et al 2012). This enables the faculty to look for latent safety threats in the clinical area whilst training staff, enabling patient safety improvement.

#### Method:

To proceed with the project, approval from key stakeholders was gained including Heads of Nursing, Clinical Directors and participants, we informed patients and the nurse in charge on the day of the simulation. There were a number of safety backup plans which utilised the theatre and recovery areas. We contacted relevant people to inform them we were running a simulation in the department such as the on call anaesthetists and relevant consultants to enable fidelity and to ensure patient safety. A scenario where six participants were required to respond as a team in real time on the CCU was developed and this was repeated, enabling 12 staff to attend. Participants were given limited information prior to the simulation replacing current practice. A post course questionnaire survey which looked to test the knowledge and confidence gained, however we recognize that this has a potential bias in regards of the participants were rating their prior knowledge after the simulation.

Results: The post course questionnaire revealed a self-reported increase in knowledge. We learned that participants specifically gained knowledge in their role of an UDA and a greater understanding of HFS specifically, leadership, teamwork and communication. A number of latent safety threats emerged, such as being unable to find algorithms and the process of acquiring the relevant drugs. We also recognised there was difference between what was in the drawer and what was on the algorithm. Therefore the trolley itself led to being overcomplicated and participants were unfamiliar with some of the equipment, which staff expressed as being stressful.

Conclusion: The numbers were too small to calculate a reliable P value therefore this has not been included. However this study shows that it is possible to utilise In situ simulation to increase the knowledge of UDA and can be used to reveal latent safety threats which may not be directly addressed. As a result of these findings we are now considering training on airway equipment. We are also encouraging staff to check the difficult airway trolley in order to build familiarity with the equipment. There was also a need to direct staff towards the UDA algorithm. However with such a vast site there remains a high need to carry out latent threat testing on each CCU to test for potential latent threats in these areas. With the added benefit of teaching and training staff in both UDA and HFS. Following this intervention we are looking to carry out another survey amongst the same participants to look at knowledge retained within the

next six months.

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## C12: Can't Intubate Can't Oxygenate: The Role of the ICU Nurse

**Wendy Carlton, Lisa Blakeley, Torbay Hospital**

Purpose: Our goal was to ensure that all ICU nursing staff are familiar with the Can't Intubate, Can't Oxygenate (CICO) algorithm. This is in line with the Difficult Airway Guidelines (DAS 2015) and combines Step 2 and Step 3 National Competency Framework (2015). We trained all nursing staff in the equipment required and prepared them in assisting the anaesthetist for front of neck access and to perform an emergency cricothyroidotomy.

Background/Significance: Many of our anaesthetists attend a course run by South West Emergency Airway Training (SWEAT) for the management of the Can't Intubate, Can't Oxygenate patient. It came to our attention that if this situation arose on the ICU many of our nursing staff would be unfamiliar with the CICO equipment and algorithm. The DAS guidelines 2015 acknowledge that for any plan to be effective it must be known to all members of the team.

Method: An adapted and condensed SWEAT course was devised, which was taught on our ICU nurse training days. The condensed course lasted 2 hours and consisted of pre-course reading and education videos, Difficult Airway Society (DAS) intubation checklist plan D, CICO algorithm, equipment needed, practical use of the equipment and procedure and demonstration of a CICO situation using simulation.

Results: All the nursing staff attended the condensed

SWEAT course and the plan is to run the course annually to include all new members of staff. The course received very positive feedback on evaluation. Staff completing competencies demonstrated advanced knowledge and skills.

Conclusion: The new Difficult Airway Society (DAS) guidelines highlight some key lessons from Royal College of Anaesthetists Fourth National Audit Project (NAP4): that success depends on decision-making, planning, preparation and skill acquisition. By providing standardised equipment and offering training reinforced by simulation the condensed nursing SWEAT course will help to fulfill this.

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National Competency Framework for Registered Nurses in Adult Critical Care Step 3, Version 2 (2015) 3:1.2 page 9

## C13: Safe Airway Management Training in an Oncology Critical Care Unit

**Nicola Doherty, Kirsty Shaw, The Christie NHS Foundation Trust**

Purpose: The RICON (risk over network) project aims to improve patient safety within the Greater Manchester Critical Care network by allowing trusts within the region to share and disseminate practice and improve the quality of patient care. The Airway Safety group introduced the B@EASE (brief, equipment, airway/ anaesthesia, staff, and emergency plan) checklist in 2015 to standardize the safety of rapid sequence inductions (RSI) in the critical care setting. The Difficult Airway Society has since replicated the aforementioned intubation checklist nationally for critically adults reinforcing the importance of a structured approach (Higgs et al; 2018).

Background/Significance: In today's current financial climate we must be mindful of utilising our resources appropriately by providing in house education, study sessions, reflective practice and staff support regarding airway safety to ensure critical care staff are confident and competent in airway management. The airway team

at The Christie NHS Foundation Trust continuously looks at innovative strategies to promote and enhance airway safety and management in the Oncology Critical Care Unit.

Method: This has included:

- Assembling a nurse led Airway Safety Team
- Delivering safe airway management workshops in Airway April focusing on human factors, reflective practice, airway adjunct stations and B@EASE clinical scenarios.
- Difficult Airway Trolley equipment training with reference to plan A, B, C, D approach.
- Provision of bed space and staff B@EASE checklist
- Implementation of electronic B@EASE checklist including grade of intubation, equipment used, staff present, medication used and planned approach used.
- Airway quiz with prizes and engagement from Matron and Nurse Leads to promote.

Results: The success of the Airway April workshops has strengthened cross-organisational education and sessions are now attended and delivered by the multidisciplinary team including nurses, outreach, theatre/ODP staff, consultants and critical care doctors. Staff report feeling more confident during RSI since the B@EASE checklist was introduced and compliance in the completion of the checklist and documentation has increased from 60% of all intubations in 2017 to 93% in 2018 demonstrating the importance of airway safety training and education.

Conclusion: Safe airway skills are imperative and essential for staff in critical care working in a challenging environment.

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## C15: Interactive Early Rehab for Patients Involving Relatives and Health Care Assistants

**Raquel Danae Garcia Rodriguez, Diane Richard, Jenny Ann Natividad, Kings College Hospital**

Purpose: To prevent myopathy, and promote human

touch in the CCU by an interdisciplinary approach combined with relatives and health care assistants (HCAs) 's input. To provide an additional role outside of their usual routine to HCAs, allowing them to feel greater responsibility to patients 'wellness.

**Background/Significance:** According to NICE Guidelines (CG83, 2009) rehabilitation is the action of restoring someone to health through training and therapy after an illness and should be started as early as possible to prevent myopathy, one of the consequences of the Critical Care stay. Approximately 25% of all Critical Care patients receive early therapy (Zanni et al., 2010). We need to create a culture which prioritises rehabilitation in Critical Care that includes interdisciplinary coordination, communication and teamwork (Lee and Fan, 2012). The rehabilitation identified was range of motion exercises to preserve flexibility and mobility of the joints (Zanni et al, 2010).

**Method:** Daily documentation of exercise, frequency and specifying who performed it. A weekly risk assessment initiated by the physiotherapist, identifying patient's exercise tolerance and safety. The nurses were trained by physiotherapist firstly and then assessed by observation to be deemed competent to train others. HCA's and relatives received training for the exercises by either the physiotherapists or nurses. Individualised Exercise Booklets/GRASP as resources.

**Results:** December 2018 - March 2019  
Consent was obtained from everyone; trainings were given to all HCA's and relatives. Out of 15 patients, 2 got 100% rehabilitation from HCA's due to no relatives; 13 got 80% of rehabilitation from relatives and 20% from HCA's when relatives unavailable.  
All relatives and HCA's felt a sense of 'belonging'; 5 patients verbalised feeling better emotionally.

**Conclusion:** Relatives and HCA's can be a resource within CCU to assist with rehabilitation. Combined approach and coordination from the MDT's and involvement of relatives helped with flow of rehabilitation.

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## C16: Improving Information-Giving to Critical Care Patients to Guide Post-Discharge Rehabilitation: A Quality Improvement Project

**Stavroula Stavropoulou-Tatla, Armin Fardanesh, Oliver Grassby, King's College London, Sarah Elliott, Medway NHS Foundation Trust**

**Purpose:** Within 20 weeks, we aimed to achieve 100% patient and therapist satisfaction with the rehabilitation information given to patients at risk of physical morbidity on discharge from critical care at Medway Maritime hospital.

**Background/Significance:** ICU survivors have a 1-year mortality rate of 30%, and a reduced quality of life associated with post-ICU syndrome; a triad of cognitive decline, physical weakness and psychiatric disorders (Steenbergen, 2015). Early rehabilitation improves outcomes, leading to greater independence. The NICE CG83 guidelines instruct the provision of rehabilitation information to critical care patients on discharge (NICE, 2009). Currently, only a third of UK trusts meet these guidelines (Berry, 2013).

**Method:** Critical care patient and therapist satisfaction was assessed using questionnaires at baseline and after each PDSA cycle. In PDSA1, a generalised rehabilitation information booklet was introduced. In PDSA2, a personalised rehabilitation plan for pre-discharge completion by the therapists was added.

**Results:** A shift was observed in critical care patient satisfaction scores, indicating a significant change in the median from 20% at baseline to 70% after PDSA2. This was also reflected in the therapist satisfaction scores which increased significantly from 60% at baseline to 80% after PDSA2.

**Conclusion:** The introduction of a generalised information booklet, supplemented with a personalised recovery plan, is an effective way of increasing critical care patient and therapist satisfaction with post-discharge rehabilitation information provision. This should translate to greater critical care patient engagement with rehabilitation and improved long-term outcomes. To further increase satisfaction, the addition of psychiatric input to the booklet is currently underway.

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## C17: criticalcarerecovery.com: Scaling Up an e-health Innovation across Scotland

**Pam Ramsay, Edinburgh Napier University**

**Aim:** To scale-up and implement an NHS e-health innovation for Scottish Intensive Care Units

**Background:** Every year in the UK, over 120,000 people survive a critical illness. Survival is associated, however, with long-term physical, psychosocial and cognitive issues. Despite professional recommendations, post-discharge follow-up and support is rarely provided (1). 25% of patients are readmitted to hospital within 3 months of hospital discharge (2), and cost-effective community-based interventions are urgently required.

criticalcarerecovery.com is a website that uses >120 interviews with ICU survivors to (1) provide information and advice on Post Intensive Care Syndrome and (2) signpost community-based support e.g. vocational rehabilitation, Citizens Advice, psychological support. The website was previously implemented and evaluated in NHS Lothian, and we aimed to scale it up to 5 additional ICUs in NHS Lothian, Borders, Greater Glasgow and Clyde, Grampian and Highlands.

**Main Findings/Results/Discussion:** We developed a taxonomy of patient need, based on completed qualitative research and identified relevant community-based resources from a Scotland-wide online directory of health & social care support (ALISS [www.aliss.org](http://www.aliss.org)). We identified clinical champions (ICU nurses) in participating sites. We provided training and support in the use of a content management system, enabling them to upload sources of local support on their dedicated website.

We experienced multiple technical and logistical issues including: the complexity of our content upload system; time constraints, variable IT skills and awareness of community resources among local champions. Content is now uploaded remotely by administrative staff. Nonetheless, between January 2016 and 2019, the website was viewed by 20,463 visitors worldwide. 39% of UK visitors were from Scotland; 58% from England; 2% from Ireland and 2% from Wales. Over 88% of visitors are new users, indicating ongoing engagement with the

website by patients and families.

**Conclusion/Future Application:** Digital innovations can rapidly reach large audiences, constituting a powerful tool in the post-hospital discharge support of ICU survivors. Their implementation and scale-up is complex, however, and cannot be dependent upon busy clinicians.

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## C18: Introducing a New Pain Monitoring System (PainMonitor) to Neurocritical Care

**Danilo Jataas, Georgina Sellick, Rosanna Hopkins, Joana Goncalves Lopes, Rosie Tasker, Katalin Kovacs, Rachel Curwood, Kristi Godfrey, James Sheehan, Cambridge University Hospital**

**Purpose:** We aim to evaluate the feasibility of using a skin conductance monitor (PainMonitor™) to assess patient's pain in neurocritical care, and investigate the correlation between the PainMonitor™ peaks per second calculation and patient CPOT scores.

**Background/Significance:** Pain is a common symptom in patients admitted to critical care and should be routinely assessed for, but may be limited by a patient's inability to communicate. Vital signs should serve as a cue to initiate further assessment of pain using methods such as CPOT (Azevedo-Santos, 2018) but such scales have limited validity and use in brain injured patients. The recent PADIS guidelines (Devlin, 2018) recommend research focus on development of objective measures of pain assessment.

Palmar skin conductance has been previously investigated as an objective indicator for pain in the intensive care setting with recent research suggesting it is more sensitive than other physiological markers (Aslandis, 2018), but this technique has not been validated in neurocritical care.

**Method:** To date, the PainMonitor™ has been applied to 12 patients admitted to our neurocritical care unit.

Peaks per second values were recorded from the PainMonitor™ whenever nursing staff performed a CPOT score. Spearman's rank test was performed to assess for a correlation between the two variables. Data was analysed using R studio (version 1.1.463).

Results: The peaks per second correlation with CPOT scores was highly significant with a rho( $\rho$ ) = 0.734 ( $p < 0.001$ ) but initial data suggests there may be a different relationship at higher and lower CPOT scores. Nursing staff report the PainMonitor™ to be easy to use and useful to their clinical practice.

Conclusion: PainMonitor™ peaks per second has a direct correlation with CPOT score and could be used as part of a multimodal approach to improve assessment of pain in non-communicative neurocritical care patients. Further data is required to investigate this relationship at different levels of sedation.

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## C19: Adjunctive Hydrocortisone Therapy for Adults with Septic Shock: Is The Evidence Conclusive?

**Nadia Christina Giuliani, University of West London /Chelsea and Westminster Hospital**

Aim: To present findings of a systematic literature search looking at the evidence for adjunctive hydrocortisone therapy for adults with septic shock

Background: The World Health Organisation (2018) has identified sepsis as an international health priority. Current treatment involves administering empirical antibiotics, fluid resuscitation and vasopressors as required (Rhodes et al. 2017). Surviving Sepsis Campaign (2016) recommends administering IV hydrocortisone 200mg per day for patients with refractory hypotension

despite adequate fluid replacement and vasopressor therapy (to treat patients with septic shock). Alternatively NICE (2016) sepsis guidelines make no specific recommendation for the use of glucocorticoids in the management of sepsis. However Surviving Sepsis Campaign (2016) has graded this as a "weak recommendation" based on "low quality of evidence" (Rhodes et al. 2017). No formal protocol exists within the ICU which I work, we follow the SSC (2016) recommendations.

Method: A systematic literature search of databases focusing on articles published between 2014-2018 (Cinahl, Medline, PubMed and The Cochrane Library), was conducted to select, appraise and synthesise the findings from primary research studies to answer a specific question (Parahoo 2014). Specific search terms were identified from the literature and research question to investigate the use of adjunctive hydrocortisone therapy for adult patients with septic shock. Inclusion and exclusion criteria refined the search, 4 studies were identified from 374 originally. A local Hospital Trust intranet search yielded no protocols, which was confirmed by the ICU pharmacist.

Findings: Consistently research suggests that adjunctive glucocorticoid therapy does not reduce patient mortality (Sprung et al., 2008; Keh et al., 2016; Lv et al., 2017; Venkatesh et al., 2018). Conversely Annane et al., (2018) concluded that 90 day all cause mortality was lower in patients who received hydrocortisone plus fludrocortisone compared to those who received placebo. Additionally, vasopressor free days and organ failure free days up to day 28 were significantly lower in the hydrocortisone plus fludrocortisone group compared to placebo. A limitation of current research available is the disparity between administration of corticosteroids (dose; boluses vs. continuous infusions, tapering medication), long term outcomes assessed and variance of definitions for sepsis. Therefore, this restricts one's ability to evaluate efficacy of adjunctive glucocorticoid therapy. In contrast to the SSC (2016) guidelines NICE (2016) sepsis guidelines make no specific recommendation for the use of glucocorticoids in the management of sepsis.

Implications for Practice: Future research should focus on long term patient outcomes, reduction of vasopressors, weaning off mechanical ventilation and use consistent terminology for sepsis and drug doses and administration methods. Additionally, Annane et al., (2018) study's findings suggests perhaps adding fludrocortisone to hydrocortisone may reduce patient mortality.

Although hydrocortisone alone does not seem to reduce patient mortality, other patient benefits may include the ability to wean down harmful vasopressors more rapidly. Therefore, continue to follow Surviving Sepsis

Guidelines (2016) and only administer glucocorticoids to those with refractory hypotension despite adequate fluid resuscitation and vasopressor therapy.

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## C20: Administration of Vasopressor Infusions in Critical Care Units in a Low Resource Setting

**Chris Carter, King's College London**

Aim: To present the findings of a systematic review to ascertain the current evidence base and best practice relating to managing a vasopressor infusion in a critical care unit in a low resource setting.

Background: Critical care units in low resource settings are presented with a range of challenges including a high burden of disease, limited human resources, equipment, drugs and access to education and training opportunities. Critical care units often admit the sickest patients within the hospital, and a proportion of those patients will require vasopressor infusions (Riviello et al, 2011). The World Health Organization (Hirshon et al, 2013) recognises the need for the provision and administration of vasopressor infusions in low and low middle-income countries. This systematic review aims to review the current evidence relating to the administration, titration and management of vasopressor infusions in this setting.  
Design: Systematic literature review.  
Data Sources: Databases searched: CINAHL and MedLine.  
Inclusion and exclusion criteria were used to guide the search.

Method: Multiple systematic searches of databases focused on papers published between 2008 - 2018. Supplementary search methods including reference lists, expert discussions and hand searching websites and journals, with the last search conducted in February 2019. Thematic analysis was used to identify themes within the data.

Findings: 30 papers met the inclusion criteria and were analysed. Themes included professional issues relating to

the administration of vasopressors; access to equipment, medications and experienced staff; and nursing considerations. Few studies focused on the practical administration and evaluation of the use of vasopressors in this setting. Future nursing research should focus on developing and evaluating standardised, evidence-based guidelines for the administration of vasopressors in a resource-limited setting.

Implications for Practice: This systematic literature review has identified a range of practices regarding the use of vasopressor infusion in a critical care unit, in countries that have few resources. It is clear that practice in regards to vasopressor infusion in critical care units is not standardised and therefore the evidence base regarding this area of practice remains arbitrary. This review will provide nurses with the current evidence to consider and review their practice in this area of nursing practice.

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## C21: Ward Nurses' Experiences and Perceptions of a Critical Care Outreach Service

**Caroline Hession, UHG, Galway**

Background: The establishment of the CCOS was hoped would provide an extension of critical care services and support between the Intensive Care Unit (ICU) and the wards (Garrard and Young, 1998). With the ever-increasing pressure on ICU resources, CCOS seems to offer a solution to giving vitally needed critical care to patients outside of the ICU (National Outreach Forum, 2010). This was the first study of its kind within Ireland.

Aim of the Study: The aim of this study is to explore ward nurses' experiences and perceptions of a Critical Care Outreach Service (CCOS) and identify areas of care which can be improved or developed to enhance quality practice.

Methodology: A qualitative descriptive was the methodology chosen by the researcher as it sought information directly from those experiencing the topic under investigation (Bradshaw et al., 2017). Data was collected using semi-structured interviews from twelve ward nurses in one site in the West of Ireland. Interviews were transcribed verbatim.

Findings: Three core categories were identified using Braun and Clarke's (2006) six step thematic analysis which included: Clinical support and decision-making, education and teaching and communication. Each nurse felt that the main purpose of the CCOS was to support members of the multidisciplinary team in their clinical decisions and work practices. Ward nurses felt it gave them the support system that some felt was lacking on the wards in the current climate of poor staffing and inadequate resources. All twelve of the ward nurses interviewed identified education and teaching on patient issues for example, teaching on equipment or certain procedures as being important. This they felt enhanced their knowledge, clinical skills and confidence when caring for a deteriorating patient. The importance of communication within the outreach setting cannot be underestimated and is an essential component of the CCOS. Communication was interlinked in all themes in these research findings.

Implications for Practice: Practice needs to change within Irish hospitals to provide patient care at the highest level. Critical Care Outreach needs to be implemented in a permanent capacity within all major teaching hospitals. Funding and training of critical care outreach nurses needs to be established to support and guide ward nurses in caring for the acutely ill patient. Critical care outreach nurses must be trained to a high level, like that of an advanced nurse practitioner due to the level of expertise and knowledge needed to fulfil the outreach role. Nursing and hospital management must recognise the need for this role and provide these opportunities within their hospitals. The role of the CCOS in supporting the ward nurses can only help to make the nurses feel supported and less isolated on the wards and may even contribute to a higher retention of ward nurses within Irish hospitals.

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## C22: The Implementation of an Advanced Critical Care Practitioner Service

### Louise Houslip, University Hospital Coventry and Warwickshire

Purpose: Due to contemporary demands of the service the role of the Advanced Critical Care Practitioner has recently been introduced within our Critical Care Unit, with the recruitment of 5 ACCP trainees.

Background/Significance: The role of the Advanced Critical Care Practitioner is growing within Critical Care Units in response to meet the needs of a changing healthcare system, recent data by Kreeftenberg et al (2019) and by Denton et al (2018) have demonstrated the safety and efficiency of the role.

Method: The Faculty of Intensive Care Medicine (2015) defined the curriculum for ACCP training and provides standards for affiliation to ensure quality of the role and parity among training. However, the training of ACCPs and the implementation of the role within units has presented a unique set of challenge. The majority of ACCPs are from a nursing background, however, other base professions include physiotherapy, ODPs. ACCPs are supervised and managed by the medical team and often work on a separate rota, however, this has presented management challenges as the requirements of an agenda for change contract still needs to be met. In addition to this, as external staff employed into training posts there have been multiple challenges surrounding training and documentation of competence as it is clear that the nursing model of education and training is different from that which the medical team follow.

Results: We would like to present to you a discussion of the challenges we have faced in the first year of our ACCP training, and how we have overcome these challenges as we begin to embed this contemporary and exciting new role into our Critical Care Units. We hope that this discussion will assist other units at the beginning of their ACCP implementation programmes with an overview of both the benefits and the challenges of implementing this service.

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## C23: How Do We Capture, Apply and Share What We Know? Developing, Piloting and Evaluating a Model of Knowledge Mobilisation in Critical Care

### Dr Girendra Sadara, Wirral University Teaching Hospital, Victoria Treadway, NHS RightCare, Gillian Woodworth, Wirral University Teaching Hospital

Background: The capture, application and sharing of knowledge is known as knowledge mobilisation. This mixed-methods study explored knowledge mobilisation in a critical care environment, specifically:

- What are the knowledge requirements of critical care practitioners?
- What are the knowledge requirements of critical care patients/families?
- Is it feasible for a clinical librarian/knowledge specialist to act as a "knowledge broker", and does this role generate cost savings?

Previous studies have demonstrated that clinical librarians contribute positively to a wide range of clinical outcomes (Brettell et al, 2016; Marshall, 2013). However, no studies have measured the contribution of a clinical librarian specifically in a critical care setting.

Aim: The aim of the study was to develop, pilot and evaluate a model of knowledge mobilisation for critical care.

Method: This mixed-methods study employed questionnaires, interviews and focus groups to collect data from critical care staff (n=63), former critical care patients / family members (n=60). Data was analysed thematically. The study had a three-phase design and was conducted between March 2016 and September 2018.

1. Establish the knowledge requirements of critical care staff / patients / family.
2. Design and pilot a model of knowledge mobilisation utilising the skills and knowledge of a clinical librarian. The model involved a clinical librarian working on an intensive care unit, joining ward rounds and assisting staff with evidence searching, academic study support, professional development, clinical guideline development, clinical decision making and patient care.
3. Evaluate the model against defined outcome measures including service development/delivery, improved quality of care, improved patient care experience and cost savings and return on investment. Appropriate ethical approvals were obtained.

Results: Data is still being analysed therefore full results

are not yet available but will be presented at the time of conference. Interim findings demonstrate that:

- Critical care staff experience multiple barriers to applying knowledge into practice
- Critical care patients / family members have knowledge requirements that aren't always met
- The role of the nurse is pivotal in sharing knowledge between staff and patients
- A clinical librarian working in the critical care team contributes to multiple outcome measures including updating knowledge / skills and service development / delivery, and generates a positive return on investment

Implications for Practice: Further research is needed to explore how knowledge mobilisation techniques and behaviours can be supported more widely. Future research should focus on developing standardised and validated return on investment tools for measuring the financial impact of clinical librarian services.

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## C24: Engagement of Families in ICU from the Nursing Staff Perspective

### Ann M Price, Canterbury Christ Church University, Petra Brysiewicz, University of KwaZulu-Natal, Sandra K. Eggenberger, Minnesota State University Mankato, Rahel Naef, University Hospital Zurich

Background: Family engagement in intensive care units (ICU) is proposed as a way to increase active partnership with patients and move away from paternalism (Burns et al 2018). Family engagement and family-centred care are closely linked to improve the quality of care. The term and practice of 'family engagement' is complex but Burns et al (2018) viewed patient and family engagement as a way to achieve family centred care. Promoting family engagement within the ICU setting is recognised as more challenging to nursing practice because of the added emotional aspects for families of acutely ill patients (Brown et al 2015).

This research was part of an international collaboration supported by the Family Care in Acute and Critical Illness Research Cluster which is supported by the International Family Nursing Association. This presentation will focus on the findings of the UK aspect of the research.

Aim: How do nurses from one English setting describe

their nursing engagement with families of adults admitted in intensive care units?

Method: A social ecological approach (Bronfenbrenner, 1979) was used for this study. Social ecology acknowledges that families are complex groups that interact with other people and their world to provide meaning.

Data were collected including demographic information, individual semi-structured qualitative interviews which were transcribed, and a questionnaire 'Factors That Influence Family Engagement (QFIFE)' (Hetland, Hickman, McAndrew, & Daly, 2017).

One intensive care unit in the South East of England was used for this study. Permanent members of the nursing team were invited to participate. Analysis was undertaken using a statistic package (SPSS version 21) for questionnaire data and a content analysis approach for qualitative data.

Ethical approval was gained from the University and Gray Area Project approval from the healthcare organisation.

Results: Seven participants completed all aspects of the data collection.

All participants rated that family engagement was important. Engagement varied depending of the acuity of the patient with nurses deciding the level of family engagement at a particular point in the patient journey. As the patients' illness stabilised the involvement of the family was promoted. The family engagement role can be described as observers, encouragers, supporter or active participants in patient care. Staff were particularly concerned about maintaining the safety of the patient during any family activities and developing good communication.

Initial analysis suggests that nurses regulate family engagement to ensure safety of patients and to promote recovery. Families need encouragement from ICU nurses to engage in a meaningful way. Building rapport and setting boundaries are skills needed by nurses and families value explanation of care.

Implications for Practice: Family engagement needs careful consideration about the amount and type of activities that are appropriate and safe for families to undertake at a particular point. However, family engagement is seen as positive contribution to the patient recovery journey.

This international project will continue to compare and combine results across the world. Consideration of future initiatives to family engagement in ICU will be further outlined.

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## C25: Patient, Visitor and Staff Perceptions of Noise in an Intensive Care Unit

**Deborah Dawson, St George's University Hospitals NHSFT, Richard Barham, Acoustic Sensor Networks, Mark Hamilton, St George's University Hospitals NHSFT, Barbara Philips, Brighton and Sussex Medical School**

Background: Sound is measured objectively in two ways, frequency measured in hertz (Hz) and amplitude measured most commonly in decibels (dB). Both measures are fundamental aspects of how sound is perceived. Measuring sound objectively, quantifies sound but does not describe the soundscape. Therefore, a different methodological approach is required. A soundscape is the auditory equivalent to a landscape and enables the description of sound as experienced by the community associated with those sounds. Often this incorporates a number of keynote sounds described as background sounds that typify a space, signals described as foreground sounds and sound marks described as culturally important sounds<sup>1</sup>. There is a paucity research into the soundscape of an intensive care unit.

Aim: To understand patient, visitor and nursing staff perception of a general intensive care unit soundscape.

Method: The sample consisted of 10 each of patients, visitors and nursing staff and was located in an 18-bed intensive care unit. Participants were asked to keep a structured sound diary recording what they could hear, how that made them feel and the most reassuring, annoying and frightening sound. Entries were requested on 2-3 occasions each day for 2-3 days, to achieve six diary entries per participant. Patients were offered support to record their entries. Data were transcribed in an Excel and analysed using quantitative and qualitative content analysis to identify the keynotes sounds, signals and sound marks. Ethical approval was granted in May 2015. All participants were provided with a participant information sheet and were required to provide written consent.

Results: A total of 29 diaries were completed by patients

(n=8), visitors (n=11) and nurses (n=10). Patient diaries contained entries on 26 occasions, visitor 79 occasions and staff 56 occasions. Entries varied in size and detail. Patients, nurses and visitors described similar sounds including conversation, equipment noise and alarms however these descriptions were subtly different. Patients, visitors and nurses described nurse and family voices as reassuring. The sound was generally acceptable to patients when it was seen to be necessary, but this group described these sounds as frightening or annoying if they felt were unnecessary. Visitors described the machinery 'hum' as reassuring and identified patient distress sounds as frightening. Nurses specifically identified the sources of sound such as conversation or the location or piece of equipment from where the sound originated. They described high priority alarms as frightening and staff talking inconsiderately as annoying.

Implications for Practice: Findings have been shared with colleagues and initiated a number of quality improvement initiatives, such as changing the types of bins, aprons and towel dispensers used on the unit, reviewing routes of entry to prevent unnecessary disturbance and a sleep care bundle. Alarm settings have been reviewed and are more regularly modified to the patient's need. Sound is more commonly used as a positive distraction, e.g. music and entertainment. Individual units need to review causes of unnecessary disturbance and consider methods to reduce unpleasant noise, but improve the positive sound environment.

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## C26: 'Keep calm PATH in OCCU and carry on'

**Nicola Doherty, Kerry Millington, Lisa Barrington, The Christie NHS Foundation Trust**

Purpose: The aim of this interventional study is to evaluate the use of the Calm PATH (Psychological Assessment Tool in Health and well being) tool in the Oncology Critical Care setting in order to identify and adequately care for patients at high risk of PTSD.

Background/Significance: Evidence suggests more patients are suffering critical illness with an adverse cost to their physical, psychological and social functioning (NICE, 2019). A significant number of patients (45-50%) are known to report acute stress symptoms consistent with post traumatic stress disorder (PTSD) such as panic, fear, depressed mood, anger, hallucinations and flashbacks (Richards-Belle et al, 2018).

Method: Aims/Objectives

- Staff education and training workshops in acute stress management from leading experts in cancer care from Psycho-oncology and Complimentary Therapy.
- Clinical supervision sessions in acute stress management for critically ill patients.
- Create a nurse-led electronic tool (Calm PATH) to identify patients experiencing stress like symptoms with suggested therapeutic strategies including practical examples.
- Employ therapeutic nursing interventions based on evidence based practice.
- Measure staff confidence pre/post education and training in acute stress management.
- Evaluate patient experience and satisfaction surveys pre/post intervention.

Results:

- Positive feedback from staff regarding training workshops and clinical supervision.
- Implementation of nurse led and user friendly tool (Calm PATH).
- Improvement in staff confidence post acute stress management training.

Conclusion: The importance of early interventional psychological supportive care, commenced during critical care admission is highly pertinent and feasible (Richards-Belle et al, 2018) but remains poorly identified, assessed and evaluated. NICE (2017) recommends highly stressed patients should be identified and offered psychological support as part of their recovery.

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## C27: Children Visiting Adult Critical Care Unit

**Sara Coentro, Natalie Hoover, Nichola Chambers, Addenbrooke's Hospital - Cambridge University Hospitals**

Purpose: Initially, our main purpose was to understand children's needs when visiting an adult intensive

care unit. Secondly, raising awareness and develop knowledge, resources and special environment to be able to address children/adolescents' needs in critical care.

**Background/Significance:** Research has shown children do suffer if a relative is critically ill in hospital (Knutsson and Bergbom, 2015). Nurses recognise the need of support and knowledge when caring for children in adult critical care unit. Nurses feel that children should visit their sick relatives and be able to express their needs at the bedside however, nurses lack in confidence and experience to empower families and colleagues regarding children in the adult critical care environment. At the bedside, nurses should support and promote hope to ensure children are able to cope with their relative's admission (Knutsson et al., 2017). Visiting the critical care unit and be able to see their loved one had positive outcomes in children as they experienced, they cared for their loved one, they felt proud to be able to visit and to be involved in the care provided (Knutsson and Bergbom, 2015).

**Method:** The Children Link Nurse role was created according to the needs of our unit. A small team of nurses, healthcare professionals, Specialist Critical Care Nurses and the Psychological Wellbeing Practitioner was developed with external and internal training to better address the children and their loved one's needs. Resources were ordered with support of Addenbrooke's Charitable Trust. Our actions naturally evolved to the development of Awareness Week of Children in Adult Intensive Care Unit across neurocritical care and general critical care team. Further training of how to use the resources available, how to communicate with children and bereavement in children were focus areas of our intervention.

**Results:** Several resources have been collected and are available to all children in adult intensive care units such as, age adapted books for children and adolescents involving what to expect when visiting critical care and bereavement in adult critical care units. Children's colourful table and chairs to keep at bedside, so children can get involved with their love ones. Colouring books are also available. Regarding bereavement, a memory box was developed which include a wide range of possible, age related supplies to offer to the child/adolescent to remember their loved one. Supplies may include candles, teddy bears, fingerprints, footprints, locks of hair, handprints, key rings, personal letters, among other stock. Each memory box is personalised according to the child's needs and wishes.

**Conclusion:** Great feedback given back to the team from families and colleagues. Children in Adult Critical Care are often not the focus of care however, their needs

should not be neglected. More training and efforts should be put in place to empower staff to accommodate the children's needs in the Adult Critical Care Unit when children visit their loved ones.

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## **C28: Critical Care Nursing Discharge Summary; A Quality Improvement Project**

**Denice Pollock, Royal Infirmary of Edinburgh**

**Purpose:** This project aims to improve patient safety and quality of care by encouraging nursing staff to complete handovers electronically, and to improve quality and relevancy of handovers.

**Background/Significance:** Patients cared for in critical care units often have complex care needs, and discharge to a ward setting is a risky time for their clinical care (Hall et al, 2015). Poor communication at this key time can leave patients vulnerable to preventable harm. National Institute for Health and Care Excellence (2007) guidelines state all patients being discharged from critical care should have a 'formal structured handover of care' from medical and nursing staff.

**Method:** Initially 15 records were audited, identifying how often discharge summaries were completed. Expectations for handover documentation were identified through discussions with senior nursing and medical staff. Compliance with our expected standards was then recorded from 50 records over a further two-week period. Visual prompts were placed at all computer workstations across our unit. A shortcut was created to input a handover template within TRAK clinical notes. An explanation of the template was included in our unit's safety brief during the first week of implementation. Post-implementation audits were carried out 1 month later, with 104 records audited.

**Results:** Initial compliance was 32%, improving to 67% post-implementation. Compliance with our individual handover parameters has also improved significantly

though use of the shortcut, ensuring our handovers are relevant and uniformly structured. Handovers are still not documented as consistently in our HDU area. Compliance averages 83% in ICU, but only 53% in HDU. We hypothesize this may be due to time pressures from higher turnover.

**Conclusion:** Feedback from staff regarding this project has been very positive. Further work to audit, and improve, the project is ongoing. We aim to create further guidance for inter-hospital critical care transfers and measure the impact this has on patient outcomes.

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## **C29: Improving Communication in Patients with Language Barrier**

**Eunice Chan, Cambridge University Hospital**

**Aim:** To present findings of a systematic literature review on strategies to improve communication when looking after patients experiencing language barrier.

**Background:** The growing number of people in the UK coming from diverse background may increase the likelihood of encountering them in the critical care. This presents a challenge to nurses working in intensive care units due complexity of language barrier and non-verbal communication in critical care patient group. A greater understanding of various recommendations to overcome language barrier is beneficial in improving the quality of a culturally competent and compassionate nursing care.

**Method:** A comprehensive and systematic search of electronic journals published during the last five years 2014-2019 was completed. Papers were critically appraised using the CASP (Critical Appraisal Skills Programme) checklist. Data were analysed using thematic analysis.  
**Data sources:**  
Databases searched were PubMed, ProQuest, Sage Journals and Anglia Ruskin University Website. Twelve articles met the criteria, three of which conducted in Australia and one in America and Canada

**Findings:** Three main strategies were identified based on the information gathered. Inclusion of language barrier in the safety checks promotes early referral and timely use of professional interpreters (van Rosse, et al., 2015). The traditional use of professional interpreter is encouraged despite its several drawbacks which include long waiting time, lengthy discussion and increased hospital expenditures (Clark, et al., 2014). However, combination of verbal techniques, action words and modern technology through telephonic interpreters, visual aids and patient education materials in different languages are non-conventional interventions identified (Tate, et al., 2017). This is utilised in our unit through a communication trolley with posters of letters, words and images. We also have an Ipad with applications containing images of patient's basic needs and common concerns. MyICUvoice is an application available in Portuguese and in the process of developing in other languages. Furthermore, our hospital provides a booklet containing common phrases in various languages to aid communication on a day to day basis. Allocation of nurses who speak the same language as the patient is employed to help meet the needs of our patients. Additionally, we arrange interpretation service when a comprehensive discussion is needed between the healthcare team and non-English speaking patients and their family. The use of these combined resources supports the findings of the literature as being the most effective way to address this concern rather than using a single medium alone.

**Implications for Practice:** Incorporation of language barrier in safety checks, referral to professional interpreters and availability of information sheets and resources in different languages are multi modal approach identified to help bridge the gap in language difference. Patient focus groups can be used to recognize needs and resources that can be improved. Through all of these measures, a more personalized and effective nursing care can be provided to our patients

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### C30: Is Bioscience Critical for Critical Care Nurses?

**Julie Robinson, Alison Coutts, City University London**

**Background:** The term bioscience encompasses a wide spectrum of subjects such as physiology, pathology, pharmacology and microbiology. In the United Kingdom, there has been a shift from biosciences to humanistic sciences in pre-registration nursing curricula. Existing literature notes deficiencies in bioscience knowledge and lack of confidence in application to practice. There is limited empirical research measuring bioscience knowledge of critical care nurses (CCNs). Bioscience knowledge should form a substantial part of nursing knowledge base to enable autonomous and safe clinical decisions, effective interprofessional working and patient advocacy.

**Aim:** This study asked what is the measured knowledge, confidence levels and preferred teaching methods of bioscience in CCNs working within the private health care sector in the UK?

**Method:** A quantitative study, using a convenience sample of CCNs working within five adult ICUs in London, completed an investigator developed online survey. The survey comprised Likert scale questions to capture self-rated knowledge and relevance to practice. Eighteen MCQs assessed basic physiology and pathophysiology seen in critical care. Content validity was assessed by an expert panel and study instrument was pilot tested before use. Internal consistency using Cronbach's alpha ( $\hat{\alpha}$ ) was calculated at .86. All eligible nurses were issued a Qualtrics online survey link, QR code and information sheet. The survey was open for four weeks and upon closure, data was imported into SPSS (v25) for analysis. The study had institutional ethics committee approval and permission was granted by the participating healthcare provider.

**Results:** 34 CCNs out of 188 responded (18%). Respondents were senior in critical care nursing experience, 55% had more than 11 years; the majority held an intensive care post graduate qualification (76%) and over half had completed their pre-registration nursing qualification overseas (62%). A large majority self-rated bioscience knowledge as good and above, highly valued bioscience and requested further bioscience teaching. This contrasts sharply with the

overall mean knowledge score of 55% (SD 2.9), ranging from a minimum of 33% to a maximum of 83%. Participants scored poorly (<50%) across basic physiology and pathophysiology MCQs.

**Implications for Practice:** Current literature recommends raising the profile of bioscience and further investigation of the interplay between bioscience knowledge and delivery of care. This was a small study in a single institution and generalisability is limited. Notwithstanding the limitations, it revealed CCNs highly value bioscience and agree the relevance it holds to clinical practice. The self-rated high level of knowledge did not correlate to objective knowledge scores achieved. Findings will inform the design, delivery and evaluation of a postgraduate education programme, alongside implementation of other practical strategies to enhance bioscience knowledge, maintain competence and build a culture of learning. Sustained efforts are required to ensure the workforce remains contemporary in their practice and able to safely meet the ever expanding needs of the critical care patient.

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### C31: Interprofessional Learning in Adult Critical Care

**Vikki Park, Northumbria University**

**Background:** Intensive care is a high pace and demanding working environment, associated with an intensity of caring for patients with competing concerns (Muldowney and McKee, 2011). Therefore, the Critical Care team develops specialist knowledge and expertise, to provide care that is safe, effective and high quality to patients and their families, through periods of critical illness (The Intensive Care Society, 2012). Whilst Adult Critical Care services are recognised for their interprofessional teamwork and collaboration (Rose 2011), evidence is significantly sparse in relation to how these professionals learn together, in this particularly acute healthcare environment.

**Aim:** The research aimed to gain a rich understanding of the culture of Interprofessional Learning in Adult Critical Care.

The objectives for this research were therefore to:  
- develop a rich description of the Interprofessional Learning (IPL) culture,  
- gain in-depth understanding of Critical Care practitioners' perceptions & experiences of IPL,  
- identify the perceived factors that promoted or inhibited IPL in Adult Critical Care.

**Method:** A focused ethnography was undertaken, to explore the Interprofessional Learning culture of three Adult Critical Care environments, within the North East of England. 12 months of data collection produced over 90 hours of ethnography fieldwork, from 18 episodes of partial-participant observation, and in excess of 20 hours of audio recordings, from 22 semi-structured interviews with Critical Care staff. Iterative analysis was driven by the qualitative data collected and was undertaken using Thematic Analysis. Ethical approval for the 'NHS staff only' study was granted internally by Northumbria University, and externally through the Health Research Authority.

**Results:** Three prominent themes were presented within the research findings, namely: 'Embedding Interprofessional Learning', 'Collaborative Interprofessional Learning' and 'Humanising Interprofessional Learning'. The findings suggest that, regardless of size or structure, the Adult Critical Care team is a rich source of expert knowledge; with the potential to embed IPL into daily practises. IPL culture in Critical Care was perceived as complex, holistic and humanistic in nature. Staff recognition and engagement with IPL varied, and the IPL culture was shaped by, the healthcare organisation, its working teams and individuals. The collaboration and communication between Critical Care professions greatly affected IPL, and Interprofessional Learning was increasingly perceptible within the environment when staff effectively worked together. The humanistic nature of Critical Care was significantly shaped by practitioners 'being human' within their professional roles. This humanised the IPL culture, creating a changeable learning climate, where Interprofessional Learning was holistically viewed.

**Implications for Practice:** This rich ethnographic research presents numerous practice recommendations. To sustain and improve the Interprofessional Learning culture, opportunities need to be embedded in daily practice. A designated IPL coordinator could be pivotal in achieving this, by safeguarding time and creating opportunities for staff to learn together. Future environmental design of learning spaces in Adult Critical Care may also be informed; thereby 'creating

space for IPL'. Increased insight into the influential factors relating to IPL, offers potential for knowledge and skill development of the wider Critical Care team. This exploratory study invites further research into IPL culture in Adult Critical Care, to improve the quality of care provided to critically ill patients and their families, and to continue to explore the holistic and humanising aspects of Interprofessional Learning revealed within this complex care environment.

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### C32: Introducing Clinical Simulation Within the Critical Care Environment: On Site Innovation

**Claire Stark, Glasgow Royal Infirmary**

**Purpose:** This project aimed to introduce the delivery of clinical simulation within our Intensive Care Unit (ICU) in a safe, effective and person centred manner. We aimed to deliver this training within the ICU during clinical shifts. We wanted to understand if this approach was feasible.

**Background/Significance:** Over the last decade, research has demonstrated the positive impact of providing clinical simulation training to both undergraduate students and trained clinical staff (1). There are challenges to providing this education in the busy NHS environment (2).

**Method:** A multidisciplinary team (MDT) was formed to explore clinical simulation training in our ICU. Our ICU is a large inner city teaching hospital in Glasgow. It has over 100 trained nurses and 15 ICU consultants. We delivered defined scenario based simulation during clinical shifts with different members of the MDT. Scenario's included: major haemorrhage and routine admission procedures. Evaluation of this process was undertaken through anonymous questionnaires of those involved in the training. We also applied Quality Improvement tools to continually improve the process and running of the scenarios.

**Results:** Seven sessions have been run thus far. 24 members of the MDT have been involved; all provided

feedback (100% response rate).

The sessions have proven popular with staff, with feedback such as:

‘Learning under stress has helped me focus more, especially as it is a safe environment.’

Staff also welcomed the opportunity to undertake this training in the ‘real’ clinical environment.

PDSA cycles have been implemented to improve the delivery of sessions: this includes an initial brief of the session and involvement of the wider SIM team in the hospital.

Conclusion: We have demonstrated that the delivery of this type of education is safe and effective, and staff found it useful and accessible.

Future evaluation should examine this approach across different environments and look at the potential cost savings.

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## C33: Empowering End of Life Care (EoLC) Decision Making and Promoting Autonomy for a Dying Awake Patient on Veno-venous Extracorporeal Membrane Oxygenation

**Joanne Tillman, Royal Brompton Hospital, Kate Harty, Patient wife, Catherine Robinson, Dr Brijesh Patel, Royal Brompton Hospital**

Introduction: A gentleman was admitted to his local DGH, and was referred to a specialist centre for VV-ECMO. Despite initially being stabilised and surviving 12 weeks, he died. What is exceptional is that the patient was awake on VV-ECMO, had capacity, would spend his days sat up, reading the paper and enjoying visits from his wife and friends.

Case Description: Patient was retrieved on VV-ECMO with Severe ARDS. Following a prolonged run on VV-ECMO and despite maximal therapy the MDT concluded that the patient would not be able to be liberated from VV-ECMO due to the progression of his lung disease.

This patient story demonstrates how the patient, his wife and the MDT came to terms with the fact that

continuing treatment was futile. How the decisions to stop treatment were made and what that meant. Issues debated were; How and when do you stop the ECMO? How you support the patient and his family in planning his death and putting his affairs in order? How do you navigate the patient wish to donate his organs?

Discussion: Further developments in extracorporeal support mean that more patients are surviving longer and are likely to be able to participate in decision making. This poses a difficult question of moral courage - how do you honour the patient’s wishes when they are dependent on VV-ECMO but unable to recover due to their underlying condition?

Implications for practice: Training and support to the staff group looking after patients in these exceptional circumstances - understanding the impact of moral courage and distress amongst groups.

Building patient and family relationships with the MDT that build trust and proactively respond to their needs.

Learning Objectives: Recognise the importance of individualised patient and family centred EoLC. Empower the MDT to deliver the wishes of the patient and family even if this is outside normal Critical Care practice.

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## C34: Providing Quality End of Life Care in the Critical Care Setting

**S/N Laura McMaster, Dr Dominic Trainor, CNS Pamela Oakes, Rachel Irwin, Belfast Health and Social Care Trust, RVH, Dr Paul Glover, CN Paul Caddell, Sr Jackie Adams, Jane Sheridan, Dr Una St Ledger, Belfast Health and Social Care Trust, RVH**

Purpose: This critical care quality improvement (QI) project undertaken in response to staff feedback aimed to improve (1) end-of-life-care (EoLC) processes; (2) staff support; and (3) multi-disciplinary team (MDT) knowledge and communication. Our intent was to learn about palliative care processes to develop a structured approach to patient-centred assessment and individualised holistic EoLC.

Background/Significance: EoLC was guided by national (GMC, 2010; NICE, 2017) and regional (RPMG, 2018)

guidance. However, despite complexity of critical care EoLC, practical speciality specific guidance was limited, negatively impacting staff’s knowledge, confidence, well-being and interactions. Staff feedback called for translation of high level documents into easily applied local level guidance to meet patient needs and for staff support resources.

Method: The QI project involving MDT staff in a large critical care unit commenced in 2016. Themed staff questionnaire data was applied to a fish bone diagram. An MDT focus group identified communication, education and staff support as areas for improvement. The MDT and palliative care teams collaborated to improve understanding and incorporation of palliative care processes and develop guidance and care planning. Learning needs analysis informed education programmes and staff support resources.

#### Results:

Communication - A person-centred EoLC plan and webpage with resource links was developed. Documentation audits revealed 100% compliance with confirmation of death after cardio-respiratory arrest.

Education - The learning needs analysis informed a critical care specific EoLC and palliative care education programme delivered to n=180 staff.

Staff Support - Staff were offered bereavement coordinator facilitated training and drop-in debrief sessions and participation in morbidity and mortality meetings.

Conclusion: The MDT displayed moral courage in changing the culture and overcoming barriers to palliative care in critical care. The EoLC care plan is under evaluation and a post-intervention survey to ascertain the impact of the improvements is underway. The EoLC education programme has been provided to other critical care units.

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## C35: Making Memories in ICU

**Lorna Copeland, Stephanie Frearson, Crosshouse Hospital**

Purpose: ‘One approach to meeting grief needs is providing transitional objects such as tangible keepsakes that create a connection with the lost loved one’ Miller et al (2014). The ‘Trauma Teddy’ scheme has been widely adopted by Police Scotland. It involves volunteers knitting small teddy bears to give to children experiencing traumatic circumstances. The aim of this project was initially to provide young children and/or parents of critically ill patients a ‘trauma teddy’ to facilitate loss and if necessary support their grief. Due to the success in uptake and interest this was extended to patients at end of life care (EOL) whereby it was offered as a keepsake for the family.

Background/Significance: Within ICU relatives often suffer similar trauma in relation to lack of contact and/or loss of a loved one. As an ICU we wanted to provide an object that could bring comfort in times of distress for everyone related to the critically ill patient and those nearing EOL care who would want it as a keepsake to take home. Therefore it seemed appropriate for us to rename our teddies ‘Remember me’ teddies.

Method: Small bears were hand knitted by a volunteer. With young children of critically ill patients these are offered as a comfort to reduce separation anxiety from loved ones. With families of patients who had entered the EOL pathway it is offered as a keepsake for the future. With these particular patients the bear is placed in beside the patient for the duration of their ICU stay then removed and given to the family member once the time comes for them to leave their loved one.

Results: The first teddy was given out in November 2018 and to date 18 have been accepted by families. One family refused the offer. Blom et al (2013) suggests that if family needs are appropriately met in the ICU, families are then empowered to support their injured relative. At present within our ICU a questionnaire is sent out 6 weeks post bereavement to families. It is the aim to add a question to this to evaluate the effectiveness of providing a ‘remember me’ teddy.

Conclusion: This project is still very much on going but due to the positive results and feedback we have gained so far, it will continue to be an integral component of our EOL care. This is in addition to the handprints and locks of hair which are also offered. It will also continue to be offered to the young children of critically ill patients.

There is strong evidence to suggest that transition objects such as these help the traumatic/grieving process and therefore, will continue to be provided by our unit. The verbal feedback we have received is overwhelmingly positive and gives us great satisfaction and reward.

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### C36: Interpersonal Touch Interventions for Reducing Stress in Adult ICU Patients: A Realist Review

**Sansha Harris, Sheffield Teaching Hospitals NHS Foundation Trust, Elizabeth Papathanassoglou, University of Alberta, Susan Hampshire, University of Sheffield, Lenita Lindgren, Umeå University, Annette Haywood, University of Sheffield**

**Aim:** To understand how interpersonal touch interventions modulate stress and related outcomes in adult ICU patients and to develop a theoretical framework to inform the design, implementation and evaluation of interpersonal touch interventions.

**Background:** Patients in ICUs experience high levels of stress. Interpersonal touch interventions are complex interventions that may represent a safe, low-cost and effective method for reducing stress (Jagan et al., 2019). However, effects vary considerably between individual studies and mechanisms underpinning the effects of touch remain poorly understood.

**Method:** We used realist review methodology (Pawson, 2002) with an intervention design-oriented approach. We searched CINAHL, MEDLINE, EMBASE, CENTRAL, Web of Science and grey literature sources without date restrictions. We conducted a two-stage literature search. Firstly, we conducted a broad-ranging scoping search, which addressed the question "how do interpersonal touch interventions reduce patient stress?" Secondly, we performed systematic searches in August 2016 and March 2017 to corroborate our developing theoretical framework. We consulted stakeholders in order to focus the review. Our main systematic search strategy contained search terms representing the population of interest (ICU) and the intervention (touch). Search results were screened against eligibility criteria. Studies were appraised for quality using the Mixed Methods Appraisal

Tool. Data extracted from ICU studies were employed for theory testing using within-study and between-study comparisons. We included data from 13 studies: 11 quantitative, and two studies employing quantitative and qualitative designs.

**Findings:** We present a theoretical framework based around six intervention design principles: 1. Dynamic touch (e.g. massage) may be more effective than static touch (e.g. handholding); 2. Lightening sedation may promote touch-mediated reductions in stress; 3. Touch provided by a close relative or friend may enhance intervention effectiveness; 4. Treatment repetition may provide cumulative benefits; 5. Interventions providing frequent experiences of moderate intensity positive emotions may optimise long-term benefits; 6. For sedated patients moderate pressure touch may be more effective than light pressure touch. While evidence from ICU studies was generally weak, we found some evidence that touch interventions were more effective if touch was dynamic, sedation was restricted, and treatments were repeated. We identified a lack of empirical evidence relating to Design Principles 3, 5 and 6.

**Implications for Practice:** An improved understanding of how interpersonal touch interventions work is important if interventions are to receive greater support in clinical practice. Our review provides critical care researchers investigating interpersonal touch interventions with theoretical principles that can inform the design of future studies. Our theoretical framework also provides guidance for critical care nurses wishing to support the use of interpersonal touch in practice. For example, practitioners should consider the benefits of lightening sedation during interpersonal touch delivery and facilitating touch by visiting relatives.

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This work is a derivative of "Harris SJ, Papathanassoglou EDE, Gee M, Hampshire SM, Lindgren L, Haywood A. (2019) Interpersonal touch interventions for patients in intensive care: A design-oriented realist review. *Nursing Open*. 6, 216–235." <https://doi.org/10.1002/nop2.200>  
© 2018 The Authors. *Nursing Open* published by John Wiley & Sons Ltd., used under a Creative Commons Attribution 4.0 International Public License. <https://creativecommons.org/licenses/by/4.0/>  
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### C37: A Prospective Repeated Assessment of Sleep Quality and Sleep Disruptive Factors in Intensive Care Unit: Strategies to Improve Patients' Sleep in the ICU

**Ghaida Alsulami, Ann Marie Rice, Lisa Kidd, University of Glasgow**

**Background:** Sleep disturbances in ICU create an important issue, as these are associated with adverse outcomes that can severely impact a patient's recovery. (1) Patients in intensive care unit who frequently require treatments and devices. This combined with the noisy and unfamiliar environment are in need of good quality sleep in order to recover from their illness (2). Despite the importance of the role of the sleep, continuous assessment for both sleep quality and sleep disruptive factors in ICUs have not been considered in previous studies. Also, such assessment does not form part of standard clinical care in ICU.

**Aim:** This study aimed to utilise continuous self-reported assessment of sleep quality and sleep disruptive factors on a daily basis, to acquire a more comprehensive overview of patients' sleep quality and identify the most disruptive factors. To assess ICU patients' acceptance of completing daily self-reports on the quality of their sleep during their ICU stay in order to understand the feasibility of implementing this method of assessment in ICU clinical-practice. To inform the future development of strategies to improve patients' sleep in the ICU.

**Method:** An observational prospective repeated assessment of sleep quality alongside sleep disruptive factors was conducted on n=120 patients in the ICU setting. Participants were both intubated and non-intubated, conscious and oriented. Over a 3-month period, sleep quality was assessed using Richards-Campbell Sleep Questionnaire (RCSQ). Sleep disruptive factors was identified using a modified Sleep in intensive-Care-questionnaire (SICQ). Clinical factors, such as severity of illness APACHE-II-score, and previously administered sedatives were also examined. Patients' acceptance of completing daily RCSQ reports was also assessed using various indicators of acceptability. Data were analysed using IBM SPSS version 23.0. G-Power software version 3.1.9.2 was used to perform multiple-regression analysis. The sample size offered an effective power of 0.88 and a significance level of  $\hat{p} \pm 0.05$ . (3) A paired-sample t-test was performed to check whether there was any significant difference in patients' sleep-quality during ventilation and after extubation that were explained by intubation

**Results:** A total of 381 self-reports RCSQ were collected

for this analysis. Patients reported  $34.4 \pm 5.60$  indicating that they an average score of poor sleep quality. The group of intubated patients (n=43) reported sleep quality during intubation ( $31.88 \pm 6.16$ ) as much poorer than after extubation ( $35.04 \pm 6.47$ ); these differences were significant with  $p < 0.0005$ . There were significant differences between the level of reporting for several sleep disruptive factors during ventilation and after extubation ( $p < 0.05$ ). Multiple-factors were reported to disrupt patients' sleep. In multivariate-analysis, factors which most significantly affected sleep [exp(b), p-value] were Midazolam [-6.424,  $p < 0.0005$ ], Propofol [-3.600,  $p < 0.05$ ], noise [-1.033,  $p < 0.05$ ], gender [1.836,  $p < 0.05$ ], daytime-sleepiness [0.856,  $p < 0.05$ ] and the presence of mechanical ventilation [-1.218,  $p < 0.05$ ].

**Implications for Practice:** Daily inquiries about patients' sleep using RCSQ shown to be feasible and acceptable to the ICU patients. The assessment also demonstrated a positive impact on patients' psychological and social needs. Based on the daily assessment, the factors that were reported differed from day to day and from patient to patient despite the constant setting. The findings stress the need to implement routine early documentation of sleep patterns in the patient care-plans. Patient perceptions of factors which disrupt their sleep should be identified individually to determine patient-specific needs to address sleep disturbances with treatment decisions. Furthermore, patients should be involved in their care. Further work is required of healthcare providers to assess their perceptions and the acceptability of the implementation of such an assessment method in the ICU.

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### C39: The Use of Restraint Mitts in the Intensive Care Unit; A Service Evaluation

**Heather Prowse, Royal Berkshire Hospital**

**Purpose:** To explore what nurses understand, practice and document in relation to use of restraint mitts (Posey Peek-a-Boo© mitts) and formulate guidance for future practice. Loss of dignity experienced by patients wearing restraint mitts and concern felt for family members witnessing it

starting point for interest in topic.

Passionate that mitts should be applied only if justification (delirium screening tools) while recognising their place in limiting self-harm.

Background/Significance: Demonstrated gap in existing knowledge base around use of restraint mitts.

Times when critically ill patients need restraint for their safety and/or protection of others. Agitated patients are at risk of self-extubation and removal of invasive lines which can be potentially fatal.

The nine principles of Bray et al.'s BACCN (2004) position statement on the use of restraint was used to build data collection instruments.

Method: Service evaluation design incorporating two methods resulting in complementary data on same subject to better understand the issue.

Retrospective review of patient documentation (14 patients) from 01/09/2017 - 28/02/2018.  
Nurse questionnaire (33 returns, 44% response rate) during April 2018.

Results methodically coded and themed without statistical package.

Submitted to University Faculty Research Ethics Committee, local Clinical Governance and Trust Research & Development for approval.

Results: Patient data; 50% patients start wearing mitts within 72 hours, 71.4% wear < 48 hours. Highlighted areas of good documentation.  
Nurse questionnaire; satisfactory knowledge, however, 65% nurses received no formal training.  
Discrepancies between responses and what was documented identifying areas for improvement, e.g. 100% nurses tell family mitts for patient safety yet evidence of this was found in only 7.1% patient records.

Conclusion: New insight and understanding into the use of restraint mitts in one District General Hospital.

Requirement for in-service training, guideline development and to look for alternatives e.g. mesh fronts, freedom sleeves.

Further research regarding any long-term psychological effects for patients who wear restraint mitts.

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## C40: Implementing Sleep Guardians to Promote Sleep in Critical Care

**Claire Irwin, Sharon Parkinson, Lancashire Teaching Hospital Trust**

Purpose: To implement the research findings conducted on our Critical Care unit by Patel et al (2014).

With the introduction of sleep guardians to protect patients sleep between 2300-0700. Staff survey showed only 50% of staff were aware of how to reduce alarm volumes overnight. This showed further education and an auditing tool for compliance were required.

Background/Significance: Delirium is common in critically ill patients, it is a predictor of worse outcomes for patients including death and long term cognitive impairment. It is distressing for patient's and their families (Page, 2008.)

Whilst sleep is the natural aid to recovery, iatrogenic sleep deprivation in critical care is a risk factor for delirium. What measures can we take to reduce this?

Method: Using the PDSA cycle we looked at how we can improve our patients sleep in critical care whilst maintaining safe practice.

- \* Allocation of sleep guardian
- \* Noise reduction
- \* Dimming of lights
- \* Clustering nursing & medical interventions where possible

Data Collection

- \* staff survey pre/post implementation
- \* Night time checklist audit
- \* Monthly CAM-ICU audit
- \* Delirium prevention bundle audit

Results:

- \* A dedicated sleep guardian per bay at night has increased staff awareness to promote patients sleep
- \* Staff awareness of noise reduction has improved
- \* Compliance with reducing lights in the bay by 2300 hours.

Conclusion: Despite the initial research we were not implementing practices to promote patient sleep. We now audit compliance at night to reduce noise and light.

- \* We allocate a sleep guardian per bay each night shift.
- \* Audit nightly checklist
- \* Audit monthly CAM-ICU data.
- \* Liaise with patient diary and follow up link nurse teams to evaluate a patients perspective regarding sleep promotion and reduction in delirium incidents.

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## C41: Movement of Staff from Critical Care Areas

**Claire Horsfield, Julie Platten, CC3N**

Purpose: Increasingly, many units are reporting requests to fill gaps in nurse staffing establishments in other hospital area as such there is concern that critical care staff are being moved to unfamiliar working environments with increased frequency. CC3N has undertaken an initial 'movement of staff' survey in order to quantify the issue.

Background/Significance: To ensure delivery of safe and effective critical care services, nurse staffing requirements are stipulated in various publications (ICS (2013), JSC (2017,) NHSE (2018)). Frequent movement of staff from their usual place of work can potentially affect care delivery, staff wellbeing and adversely impact on staff retention.

Method: A group of Network Lead Nurses developed, piloted and adapted a survey tool utilising Microsoft excel. In December 2018, the survey was sent to Network Lead Nurses (or nominated other) with instructions for completion and submission of data sheets. Lead Nurses were requested to circulate the invitation to participate in the survey to all their critical care units

Results: Data returns were received from 59 units, of which 18 units stated that no requests to move staff were received during the survey period. 41 units stated that a total of 297 requests were made for staff to move to other areas and 250 staff were moved during this period. On 47 occasions the request was refused. The number of requests was highest for the night shift period. There were occasions when regular staff were moved in preference to agency staff, and occasionally staff were required to return to the critical care unit.

Conclusion: It appears there are frequent requests for critical care staff to cover other areas of the hospital. It is recommended that regular data collection could enable greater insight into the frequency of staff moves. Further work may include the effect this has on education,

critical care patients, the staff member and wider team. (296 words)

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NHSE (2018) Draft DOS: Service Specification for Adult Critical Care Services. Available at: [https://www.engage-england.nhs.uk/consultation/adult-critical-care/user\\_uploads/1661-adult-acute-care-service-spec.pdf](https://www.engage-england.nhs.uk/consultation/adult-critical-care/user_uploads/1661-adult-acute-care-service-spec.pdf)

## C42: SCARF: Supporting Community Recovery And Reducing Readmission Risk Following Critical Illness. And Next Steps

**Eddie Donaghy, Susanne Kean, Sheila Rodgers, University of Edinburgh, Jo Thompson, Royal Infirmary of Edinburgh**

Background: Survivors of critical illness experience multi-dimensional disabilities that include physical, psychological and cognitive decline, social challenges and reduced quality of life. Impact is also high for families/carers especially in social and psychological domains. [1]. Between 25–30% of critical illness survivors require unplanned hospital readmission within 90 days following index hospitalisation [2]. Reasons for unplanned readmissions, from a critical care survivor and family member/carer perspective had not previously been investigated. Post-ICU recovery programs have not been widely studied or adopted despite the scope of these problems.

Aim: To understand the needs of critical illness survivors in the community, identify barriers to recovery and uncover reasons for early unplanned hospital readmission within 90 days from the perspective of survivors and their family members/carers. This with a view to informing the introduction of an evidence-based, cost-effective new ICU anticipatory care pathway (ACP) in Scotland's second largest Health Board, NHS Lothian.

Method: We recruited survivors (n=29) and their carers (n=29) from three Scottish Health Boards. Patient inclusion criteria were mechanical ventilation for ≥48 hours, aged ≥18years. Exclusions were organ transplantation, primary neurological, palliative, lacking capacity and too ill. Purposive sampling was used to achieve a range of age, gender, and socioeconomic status. Interviews were semi-structured, and conducted in the survivor's and carer's home using a taxonomy informed by literature review. Using the same recruitment strategy, new critical illness survivors (n=21)

and their carers (n=22) were identified. Community based focus groups were subsequently conducted after initial analysis and integration of the interview data to validate/challenge initial findings. Data collection was January-December 2015. Interviews and focus groups were digitally recorded, transcribed verbatim and entered into NVivo V.10. Thematic content analysis was used to analyse all data. Ethics approval granted by SE Scotland Research Ethics Committee 2 (14/SS/1032).

Results: For approximately half of all critical illness survivors a 'complex health and psychosocial needs' context occurred in patients who prior to critical illness were high users of health and social services and exhibited multi-morbidity, polypharmacy, psychological problems, mobility issues, problems with specialist aids/equipment and fragile social support. These patients typically described inadequate preparation for hospital discharge, poor communication between secondary/primary care, inadequate support with psychological care, medications and goal setting. This complex multidimensional situation contrasted with the remaining alternative 'non-complex' survivors who did not exhibit complex health/social care needs and were not high users of health/social services prior to critical illness [3].

Implications for practice: We concluded that introducing a new anticipatory care pathway (ACP) for critical illness survivors with 'complex health and psychosocial needs' prior to their critical illness merited funding, development and evaluation. Following funding we introduced a new ACP on June 1st 2018. We highlight (i) data from our new ACP of improved in-hospital assessment of survivors with 'complex health and psycho-social needs'; (ii) summarise processes undertaken to facilitate quicker, better informed communication between hospital ICU staff and GPs, NHS/Social Care Locality Hubs and community pharmacies; (iii) show benefits to survivors and families/carers of the new ACP and (iv) address the challenges of introducing a new ACP and ensuring sustainability.

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## C43: Improving ICU Relatives' Satisfaction with Access & Engagement in Care

**Dr Una St Ledger, Sr Lyndsey Adamson, Dr Jon Silversides, SN Sharlene Mansell, Dr John Strange, Belfast Health and Social Care Trust**

Purpose: The purpose of this quality improvement (QI) project was to (1) learn 'what mattered most' to intensive care unit (ICU) relatives; (2) align staff and relatives' priorities; (3) identify cultural enablers and barriers to improvements; and (4) implement improvements to visiting arrangements to enhance the ICU experience.

Background/Significance: Powerful service user feedback of constrained advocacy owing to restrictive visiting inspired this initiative. Contemporary movements, including 'Humanising the ICU' (LaCalle et al. 2017) and research stress the importance of partnership and family presence for supporting recovery and minimising psychological/moral distress (St Ledger et al. 2013) and delirium (Giannini, 2017). Moral courage was required to change culture based on long-standing assumptions, values and beliefs.

Method: Using QI person-centred methods baseline data was obtained through service user focus group (n=8) and multi-disciplinary team (MDT) workshop (n=23). Theming, content analysis and Pareto chart display identified extended visiting times and volunteer service to improve access as important for testing through PDSA change cycles. Pre-intervention (relatives n=23) (staff n=25) and post-intervention (relatives n=16) (staff n=18) satisfaction surveys were completed and improvements evaluated against outcome/process/balancing measures.

Results: Outcome Measures - Volunteer service three days per week. Visiting times extended by 60% (from 2.5 to 6 hours daily). Relatives' and staff's satisfaction ratings improved greater than 50%. Ongoing feedback 80% improvement. Relatives requested greater visiting flexibility.

Process Measures - Waiting time from ICU arrival to ICU admission improved on volunteer-supported days. Relatives reported increased opportunities to speak to physicians. Nurses reported decreased verbal complaints/disagreements.

Balancing Measures - Pre-intervention concerns about impact on noise levels and privacy not reported as problematic.

Conclusion: Project success was contingent on interventions identified as important and acceptable to all groups, regular feedback and addressing environmental constraints. Next steps include: increasing

flexibility of visiting arrangements; identifying/testing opportunities for involvement in personal care mobilisation and rehabilitation; and spread to other ICU's/regional network

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## C44: Implementing an Acute Intervention Team in a Specialist Orthopaedic Hospital

**Matthew Phillips, Royal National Orthopaedic Hospital**

Purpose: To implement and evaluate the introduction of an Acute Intervention Team (AIT) in a specialist orthopaedic NHS Trust

Background/Significance: Whilst provision of Critical Care Outreach is commonplace in general UK hospitals, as a small specialist NHS Trust we faced unique challenges in meeting best practice standards (FICM, 2018)

Method: Using Quality Improvement (QI) methodology (PDSA), in 2018 we reconfigured our service to address our challenges, implemented it into practice and are currently evaluating its impact on service provision and patient outcomes.

We engaged key stakeholders in consultation-ward and critical care staff, Heads of Nursing, directorate and executive management. We agreed what to call the service, what it should look like, team roles/responsibilities and obtained approvals from relevant trust committees and agreed a SOP, training and competency requirements.

The new nurse led team have dedicated full time nurse leadership. Escalation prompts added to the electronic nursing app and escalation and referral protocols enable the team to prioritise their work load. A number of strategies supported its successful implementation into practice including widespread communication, simulation training and advanced practice education/competencies (NORF, 2012). A database is collating team

activities and evaluation data to inform future action.

Results: Since its introduction, rapid response calls have increased but most are medical emergencies rather than cardiac arrest calls and there have been no clinical incidents (two in previous year). Team satisfaction has improved and ward staff feel more confident and better supported. Improved referral systems, increased staffing and improved governance are thought to be key contributing factors to this success.

Conclusion: Ensuring small specialist NHS Trusts with limited resources can comply with best practice standards is of vital importance. This requires a creative approach using continuous QI to design and test new ways of working. Over the next 12 months, we plan to formally evaluate implementation success and identify next steps.

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## C45: Multi-media Technology as a Teaching Tool in Enhancing the Safety Huddle Project

**Ria McMullen, Ana Mendonca, Royal Berkshire Hospital**

Purpose: Implement the use of multi-media to enhance nursing practice on safety huddle

Background/Significance: Our team introduced SAFE ICU Huddles project as safety is paramount through teamwork and cooperative time management. It was derived from safety huddle concept, a communication tool developed in order to proactively address risks, enhance workflow and balance workload (Glymph et al., 2015). Our hospital is currently driving this concept across the Trust with a focus not only on patient safety but also on staff wellbeing by giving staff opportunities to share concerns, helping them to feel supported and acknowledging their accomplishments.

The project was first introduced in 2017 following a quality circle improvement assignment based on recommendation of a local unit study. It was initially

taught through use of PowerPoint presentation-based lecture. Upon review last year, the project was not as established and effective as what we had hoped therefore we have devised a different approach.

The project has been developed with an innovative training strategy, involving videography, role-playing, music, lecture and poster. It is known that learning is more efficient when the inputs experienced are conveyed through diverse media (Hattie and Yates, 2014).

Method: We developed video role play, featuring our unit's nurses representing all bands as part one. Part two is a music video of multidisciplinary team singing about it in a comedic style. Finally, we have produced posters and guide cards prompting the S-A-F-E mnemonic. These videos and poster were incorporated to the lecture sessions.

Results: These methods engage more senses, while the use of humour attracted the wider team's attention. The impact of these innovative approaches yields positive results.

Conclusion: The project has been well-received as a result of using technology. We aim to share this innovation on a wider platform, the videos will be shared via social media. It is time to embrace the full potential of technology and all its benefits as a teaching tool in healthcare.

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## C46: ICU: A Place for Music?

**Claire Bennett, Music in Hospitals and Care**

## C47: The Laura Hyde Foundation: Caring For Those Who Care About Us

**Liam Barnes, Trustee Chair, Laura Hyde Foundation**

The Laura Hyde Foundation was setup in March 2018 following the tragic suicide of a military nurse who had worked extensively at Derriford hospital.

Laura had suffered in the past with mental health issues but the pressures of both her personal and work life took their toll and she was unable to continue.

The charity was created by her family with support of her friends and colleagues to ensure that this tragedy never happens again and to insist that bespoke mental health support is available for all medical personnel and the emergency services as a whole.

The Laura Hyde Foundation is the UK's only charity that focuses on this topic ensuring that the stigma surrounding the mental wellbeing for our medical professionals is addressed and that people have a fit for purpose mental health support network that takes into account the fantastic job that they do.

## C48: A Mixed Methods Research Study: Exploring Resilience in Contemporary Nursing Roles in Wales

**Judith Benbow, Professor Danny Kelly, Dr Aled Jones, Cardiff University**

Background: Nursing is categorised as a highly stressful occupation, stress and burnout are known consequences of healthcare workplace adversity which can negatively affect care. Critical care nurses are known to be at high risk of burnout (Mealer et al., 2017). Resilience is known to buffer the adverse effects of stress. Nurses' ability to perform is inextricably linked to challenges and support available (Maben et al, 2012). However, limited research exists that examines nurses' understanding of resilience and its relevance to workplace environments.

Aim: To explore a more holistic socio-ecological (Ungar, 2011) examination of nurses' resilience. The environment that nurses experience the adversity and respond to it. To provide novel insights into the intrinsic and extrinsic influences, that shape resilience of nurses in Wales.

Method: A mixed methods design consisting of a purposely-designed questionnaire and analysis of free text responses exploring perceptions of resilience and work environments was employed (December 2016). Participants included Registered Nurses (N = 1459) from across Wales, including over 100 critical care nurses. Quantitative and qualitative responses including 8,000 free-text comments (over 89,000 words), were descriptively analysed utilising 'Smart Survey', SPSS, Excel and Microsoft Word. Early findings were shared, to inform the study, at a pan Wales stakeholders event (March 2018).

Results: Three main areas were presented: - what

nurses understand resilience to be, adversities experienced and nurses routes to resilience. Nurses' resilience was presented as a normative professional attribute, outcome and process that contributes to the functioning of nurses and others to deliver- composed, compassionate excellent care whilst managing their own and others emotions. The process of resilience is learnt from exposure to adversity, contributes to the outcome of career longevity shaped by the availability of both intrinsic and extrinsic resources. Resilience ripples- levels high or low are contagious. Nurses' resilience acts as a resource for others, stabilising emotional flow, within everyday emotionally charged environments to enable patient flow. Secondly, adversities facing nurses were presented, unlike other research nurses' traditional intrinsic work, though demanding, seemed not necessarily the challenge, more nurses' inability to deliver care required and overcome environmental challenges, particularly resources and workload. Acute and or accumulative adversities that tested nurses' resilience that transpired into critical tipping/turning points as well as personal thresholds for some, were presented. Leaving no doubt concerning the demanding nature of nurses' work.

Finally, despite such adversities there was an overriding sense of nurses' commitment to deliver quality care, their own resilience and others. Which made these findings striking indicating that even in the most severe circumstances nurses can navigate routes to resilience drawing upon extrinsic and intrinsic resources; support seemed critical to this.

Implications for Practice: These unique insights can inform practice, education, policy and research and open the door for resilience to be re-defined within a professional and employment frame that is less individually psychologically orientated. These insights could help nurses' resilience and lead to better support for critical care nurses striving to deliver excellent patient care.

#### References

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## C49: The Incidence and Impact of Incivility in Pre-Hospital Care

**Nicki Credland, University of Hull**

Background: Incivility or rudeness is a relatively mild form of interpersonal aggression. Customers, clients, and patients serve as the primary perpetrators of incivility particularly in high-intensity, service-oriented organizations such as the pre-hospital environment (Flin, 2010). Incivility or rudeness has been shown to have adverse consequences on clinical decision making, diagnostic and procedural performance (Riskin et al. 2015). Rudeness from relatives results in statistically significant poorer team performance from teams under stress. Diagnostic and procedural interventions are worse with incivility and Porath et al. (2013) suggest that 38% of recipients reduce the quality of their work when faced with incivility. There is a dearth of research exploring the incidence of this negative behaviour and, in turn, the effect this has on clinical care. Although the rude behaviours regularly experienced by health care practitioners can seem benign, they may result in patient safety errors with potentially devastating outcomes

Aim: To evaluate registered paramedics perception of incivility in clinical practice

Method: Study objectives:

1. To conduct semi-structured interviews with registered paramedics to identify the incidence of incivility
2. To explore the paramedic's understanding of the relationship between decision making, clinical competence and incivility
3. To understand if incivility affects staff wellbeing in the pre-hospital environment

Study design:

Qualitative, in-depth, semi-structured interviews will be conducted to understand the incidence and impact of incivility on paramedics. Each interview is expected to last for 30-45 minutes and interviews will be undertaken over a 6-week time scale. A convenience sample of registered front line paramedics working for Yorkshire Ambulance Service will be used. The final sample will be identified once data saturation is achieved. Data saturation is achieved when no new themes are identified.

Interviews will be audio-recorded, verbatim transcribed and analysed using thematic analysis. Qualitative analysis of interview will be conducted to assess: incidence and impact of incivility in pre-hospital care. All identifiable data will be anonymised. All transcripts will then be checked for accuracy by the PI with initial emergent areas of interest noted. Transcripts will then be analysed using thematic analysis.

The study has full ethical approval from University of Hull

Faculty of Health Sciences ethics committee.

Results: The study is at data collection stage therefore there are no results available at this time

Implications for Practice: It is not possible to identify implications for practice until data collection and analysis is complete. However, the critical care / intensive care environment is equally a high intensity area and conclusions from the study will be linked to critical care nursing.

#### References

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## C50: Moral Distress Among UK Critical Care Nurses - How Urgent is the Issue?

**Nicky Witton, Keele University, Dr. Sandra Goldsworthy, University of Calgary, Dr. Leah Phillips, College of Licensed Practical Nurses of Alberta (CLPNA)**

Background: The urgency of examining nurse work environment factors has accelerated in recent years due to the nursing shortage and concerns with retaining and stabilizing the critical care nursing workforce. With cutbacks, nursing shortages, increasing nurse/patient ratios and changing patient care delivery models, healthy workplaces have gained traction as a variable that influences whether a nurse stays or leaves the unit, the organization, or even the nursing profession. This study explored the Critical Care Nurses view of work environment and Moral Distress in the Midlands, UK and Alberta Canada. Moral Distress is recognised as an international problem which contributes to decreased work productivity, burnout, job dissatisfaction and intent to leave for Critical Care Nurses.

Aim: This presentation will focus on the UK Critical Care Nurses perception of Moral distress portion of the international study.

Method: A cross sectional survey was used to investigate whether there is a relationship between levels of moral distress and intent to stay among a sample of critical care nurses from the United Kingdom? An online survey

using the Moral Distress (revised Hamric, 2012) tool incorporating the PES- NWI (Lake, 2002), was used to measure Critical Care Nurses opinion of moral distress and work environment. Nurses' self-perceptions of moral distress were correlated with a measure of intention to stay working on their unit, in their organization and in their profession. Ethical approval was gained from the Keele University, the University of Calgary and included Health Research Authority (HRA) approval. Descriptive statistics were assessed for the extent and pattern of missingness and qualitative commentary adds further commentary for discussion. Measurements of moral distress (MD) were calculated by multiplying the frequency by the intensity on the 21 item MDS-R allowing a mean and standard deviation to be calculated for each individual moral distress item, as well; as a mean composite MD score. Past research has shown that composite MD score is a reliable measure of overall moral distress (Hamric, 2012). Pearson correlations were performed to examine the relationship between moral distress and Intention to leave.

Results: Critical Care Nurses (N=266) from nine Adult Critical Care Units (General & Cardiac) responded and provided rich description to support the statistical findings.

Findings showed the top three moral distress scores were; 1) continuing to participate in care for a hopelessly ill person who is being sustained on a ventilator, when no one will make a decision to withdraw support, 2) Initiating extensive life-saving actions when I think they only prolong death, 3) Working with levels of nurse or other care provider staffing that I consider unsafe. In addition, it was found that moral distress is significantly negatively correlated with intent to stay in the ICU and the organization (but not the profession).

Implications for Practice: This presentation will provide insight into moral distress levels among UK Critical Care Nurses and explore implications for managers, critical care nurses and policy makers. Strategies to manage this phenomenon will also be discussed.

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# Poster Abstracts

## P01: Reduction in The Length of The Organ Donation Pathway

**Louise Hubner, Cathy Miller, NHS Blood and Transplant**

**Purpose:** To improve and streamline the donation pathway for the donor, donor family, donating hospital, organ retrieval team, implanting centre and recipient. To improve transplant outcomes and increase organ utilisation.

**Background/Significance:** The length of the solid organ donation pathway has been increasing over the last few years from Donors after Brain Death (DBD) and Donors after Circulatory Death (DCD). National Health Service Blood and Transplant (NHSBT) (2018) Annual Donation Report.

The reasons for elongated time frames are multi factorial; from donor identification and referral, assessment of an ageing (and heavier) pool of potential donors (with increasing co-morbidities). There is a widening acceptance criteria and innovation in implantation to increase the number of transplantable organs available. This has had an unanticipated impact upon donating hospitals and critical care units which we have been required to address.

The National Health Service Blood and Transplant (NHSBT) Taking Organ Donation to 2020 strategy (2013) discussed the need for donor hospitals to perform more consistently; Referral to the Specialist Requester (SR) or Specialist Nurse for Organ Donation (SNOD) is now happening with more consistency and the donating hospitals have been responsive to our requests. The mid-point review (2017) acknowledged that progress had been made in many elements of the pathway.

**Method:** All elements of the pathway were reviewed. We have focussed as a Professional Development Team (PDT) upon the parts of the pathway for which we are responsible; Stakeholder meetings were undertaken with each organ donation team across the whole of the UK (12 in total) and questions posed to the specialist nurse workforce to assess what elements of the donation pathway we could influence and for ideas to improve the service to donors, donor families and donating hospitals. As a Professional Development Team our key remit is the education of the specialist nurse workforce and through engagement and collaboration we requested a 'top ten' ideas or 'tasks' which could be undertaken at the beginning of the process to speed up the part of the pathway for which we are responsible. A 'Ten Point Plan' has been collaboratively devised and has recently been

introduced to the SNOD and SR workforce.

**Result:** Although we have only recently introduced the 'Ten point Plan', the workforce and all stakeholders in it are now very aware of the length of the process and make every effort to ensure the service is as streamlined as possible. We have also focussed on; The donation process running as smoothly as possible for the donor, their family, the donor hospital and recipients. Ensuring baseline and timely observations and vital information is available and documented prior to offering and any rationale for incomplete information to be made known to recipient centres. We have actively encouraged team working and SR / SNOD's working together with trainee staff etc in daylight hours to expedite the pathway for all concerned.

**Conclusion:** The length of the pathway has been increasing and this has consequences which are unintended and impacts upon critical care medicine and nursing. This is not consistent with our vision to provide a caring, expert and quality service. In our vision to become world class leaders in terms of organ donation, our relationships with our donating hospitals is key to our success and we will continue on our quest to ensure all aspects of the donation pathway are responsive and donor focussed.

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NHS Blood and Transplant (NHSBT) (2013) Taking Organ donation to 2020: A detailed strategy; London: NHS Blood and Transplant

## P02: Gold Standards of Renal Care Outside the Doors of Critical Care

**Pauline Goddard, Frimley Health NHS Foundation Trust**

**Purpose:** The aim of the project was to compare before and after the opening of an 8 bedded Acute Renal Unit. The impact from service delivery locally, and within Critical Care from bed availability perspective, cost, length of stay and quality of care from the Patient perspective.

**Background/Significance:** The Acute Renal Unit was opened within the trust to improve care around the renal patient and to set gold standards. In the UK AKI was estimated to cost the NHS more than £1 billion per year. 50% of AKI care was considered good and 20% of post

admission AKI was avoidable. It has been highlighted that inpatient mortality in the UK has been around 20-30% (NICE 2013). AKI 3, chronic and acute dialysis patients are admitted to the Renal Unit and both haemodialysis and peritoneal dialysis can be facilitated. The hot bed can be flex to facilitate patients in all specialities during acute admission to come to the renal unit for dialysis and then return to their ward following dialysis. The ward has 2 hot beds and will flex in accordance to service requirements. Renal consultant cover 7 days a week. Prior to this Patient would have been admitted to Critical Care or sent further a field for dialysis treatment which impacts on patients and family as a whole. The bed pressure on critical care and length of stay with cost while waiting for a bed in another acute trust with dialysis service.

**Method:** Methodology accessing ICNAR and admission data base to pull admission numbers for dialysis before the renal unit opened and AKI 3 patients admitted. Comparison of renal unit opening and dialysis service available looking at January 2018-2019 data base and Critical Care service impact.

**Result:** The effects of an Acute Renal Unit within the District General Hospital has a huge impact on service delivery to renal patients and their family. Critical Care service has witnessed a reduction on the numbers of patients admitted just for dialysis and AKI 3 without need for organ support. This ensures a more efficient service in critical care and ensures gold standards of treatment for renal Patients outside the doors of critical care. Practice development was utilised through the PDSA to devise an education poster to all ward areas to ensure Gold standards was followed for HOT bed patients and AKI patients (this can also be available for poster presentation).

**Conclusion:** Quality focused renal care on an acute ward can reduce cost and improve bed availability for level 3 care within Critical Care.

7 day consultant service and service availability for patients requiring dialysis. Delivering the right care at the right time in the right place. Feedback from Patients highlights local service and quality service on the friends and family feedback. Meeting the challenges faced with moral courage, means as a team we adapt flexibility, resilience and share knowledge and skills which is a fundamental way forward, with delivering an excellent renal service outside critical care. This is a way to promote sustainability in excellence in renal care.

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National Institute for Health and Clinical Excellence (2013) Acute Kidney injury: Prevention, detection and management of acute kidney injury up to point of renal replacement therapy (Clinical Guidelines 169), London: NICE, available from <http://guidance.nice.org.uk/CG169>

## P03: Human Factor Training for ECMO Specialist Nurses to Improve Safety and Communication

**Anoma Gunawardena, Jo Tillman, Ian Naldrett, Royal Brompton Hospital**

**Purpose:** To improve communication among ECMO specialists within the multidisciplinary Team. Enhance troubleshooting and safety for patients on extracorporeal Membrane Oxygenation (ECMO) Embedding standardized tools & behaviours into the care process to improve safety in a complex environment.

**Background/Significance:** During analysis of critical incidents related to patients on extracorporeal membrane oxygenation (ECMO) several themes were identified including situational awareness and task fixation. The trends were more prevalent out of normal working hours. Therefore ECMO specialists were provided human factors training tailored to their role within the Multidisciplinary team.

ECMO specialist nurses are qualified with physiology of extracorporeal circulation, function of the device and the management of patient on ECMO for severe heart and lung failure. The support of severe heart and lung failure with ECMO has significant differences in the focus of care, which is most apparent during device troubleshooting, often when patients are in cardiac arrest. Often these situations are highly stressful and more prone to human error, therefore this was a focus of the bespoke training that was provided.

**Method:** Specific Human Factors Training was provided to ECMO Specialists within the multidisciplinary team. In addition to human factors training, debriefing following every ECMO retrieval and critical incident.

**Result:** Even skilled, experienced highly motivated individuals make mistakes. Supporting staff through training debriefing and providing safety culture to reduce unnecessary hierarchy to empower all members of the MDT to have the ability to raise their concerns. Staff reported reduction in distraction and interruption during ECMO intervention. A reduction in critical incidents were reported last three months following human factors training.

**Conclusion:** Human factors training was embedded into extracorporeal membrane oxygenation course and provided as a sub category of training across the critical care MDT to improve, situational awareness, use of critical language, and enhance safety culture within the critical care department.

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factor: the critical importance of effective teamwork and communication in providing safe care; BMJ, Volume 13. [www.elsevier.com/locate/bsr](http://www.elsevier.com/locate/bsr)

## P04: Improving the Care and Management of Central Vascular Access Devices at Northern Devon Healthcare NHS Trust

**Jackie West, Donna Colwill, Kathleen Wedgeworth, Northern Devon Healthcare NHS Trust**

**Purpose:** The initial aim was to develop a tool that could be used to document the visualisation of central venous access devices and monitor the risk of developing an infection. This developed into a project to improve the care of central venous access devices (CVADs) across the Trust and community sites and improve the education of staff caring for these.

**Background/Significance:** There was no standardized practice regarding the care of CVADs and in this small Trust the nurses on ICU were frequently called upon to support other ward areas with the care of the lines and to offer advice and support. The initial work was done to ensure that our ICU was acting within the guidelines in the EPIC 3 document : <https://improvement.nhs.uk/resources/epic3-guidelines-preventing-healthcare-associated-infections/> and by standardizing the practice and prompting early recognition of potential line infections it was hoped that we could improve patient care and outcomes.

**Method:** There was an initial baseline audit of staff knowledge and training with regards to CVADs and their care. This highlighted a deficit in knowledge and education. The Quality Improvement Team lead this data collection, whilst a tool for assessing central lines was adapted by the specialist nursing staff involved. This scoring tool was trialed within ICU initially and then through a PDSA cycle on other ward areas who frequently had patients with central venous access. Compliance and feedback was positive. We then looked at increasing the provision of education for the Trust nurses and increased the study days on this subject from 4 to 12 sessions a year, which was supported by ICU and Chemotherapy unit staff. A poster outlining the recommended care of CVADs was developed and disseminated to all staff in the Trust also. ACVAD passport was also developed to aid patients and staff in community settings and is in the process of being ratified by patient involvement groups. This project also then reached into the documentation and record of insertion that was not standard in all

areas and so a insertion checklist and safety record was adapted from the Intensive Care Society templates and trialed and modified with a PDSA cycle on ICU with Consultant Anaesthetist input. A launch month for all of these improvements was identified and involved both corporate communication and walk arounds to all clinical areas to promote the initiatives and help raise awareness of all vascular access devices. The QI team analysed the incident reporting also that recorded 0 incidents involving CVADs in the month following these initiatives. They are also repeating the staff surveys.

**Result:** Positive feedback from all areas regarding the improvement in education and the clarity of care of CVADs. Unfortunately this Trust did not collect data regarding the rates of infection of CVADs previously, but this is now being collected. We can not prove a reduction in infection rates therefore, but we would hope that this would be a positive consequence. As stated before there have also been 0 incidents reported with regard to CVADs since the improvement in education and awareness raising exercise, this is the first time in over a year!

**Conclusion:** Improved awareness of CVADs and the monitoring of potential line infections. Better staff awareness of the different types of CVADs and the care involved with them and improved documentation of their insertion; care and removal.

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## P05: Improving Tracheostomy Care: Standing on The Shoulder of Giants

**Jennifer Lowes, University Hospital of Wales Cardiff**

**Purpose:** To improve patient care and safety through the implementation and development of a Tracheostomy MDT which comprised a physiotherapist, speech and language therapist, nurse and ITU consultant.

**Background/Significance:** Landmark papers have demonstrated recurrent themes related to the provision

of training, staff and equipment, leading to avoidable patient harm, life-altering morbidity and mortality (McGrath et al, 2010; Wilkinson et al, 2014). The development of the Global Tracheostomy Collaborative (GTC) and the Improving Tracheostomy Care (ITC) project have provided the necessary infrastructure to make improvements, with individual organisations responsible for its implementation. Also, within NHS organisations there is often no formal or structured system for taking responsibility for the weaning, downsizing or decannulation of the tracheostomy (Cetto et, 2011).

**Method:** This quality improvement project, funded by the NHS Wales Critical Care and Trauma Network, developed a dedicated tracheostomy team to improve the quality of care provided to those patients requiring a tracheostomy through staff education, equipment standardisation and multidisciplinary tracheostomy ward rounds. Global Tracheostomy membership was funded through involvement in the ITC project.

**Result:** Formal tracheostomy teaching was delivered by the tracheostomy team to 165 clinicians involved in tracheostomy care. Improvements in self-assessed confidence with knowledge and were observed for all aspects of tracheostomy care. Standardisation and centralisation resulted in reduction in waste and unnecessary variation. Compliance with 'emergency tracheostomy blue box' availability with an increase from 5% to 100%. Comparison of data from the QI period against baseline data, demonstrated improvement in rates of decannulation, and non-significant improvements in time to decannulation, critical care and hospital length of stay. Additionally, there were associated reductions in adverse events.

**Conclusion:** This QI project, supported by involvement with the GTC and ITC, resulted in reductions in adverse events, improved patient safety, non-significant reduction in time to achieve weaning milestones and a reduction in hospital length of stay.

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## P06: Adapting the SBAR Tool to Provide Effective Learner Feedback in Critical Care

**Alice Boatfield-Thorley, Alex Avens, Sharon Mc Dermott, Sarah Cowell, Guy's & St Thomas' NHS Foundation Trust**

**Purpose:** Critical Care Clinical Educators (CEs) at GSTT work with a range of learners providing 'CE Support Sessions' at the bed side. The delivery of constructive feedback and guidance is an essential part of this assessment and development process. Our aim was to develop a standardised template for writing high quality feedback.

**Background/Significance:** Regularly providing feedback to learners correlates positively with improved performance (Plakht et al, 2013). The 'SBAR' - Situation, Background, Assessment, Recommendation - tool helps to facilitate the delivery of clear and succinct information and mitigates ambiguity (NHS Improvement, ACT Academy, 2018). We adapted this tool to deliver written feedback to our learners.

**Method:** The SBAR tool is adjusted for the learner, therefore patient information is minimal and anonymous. After each 'CE support session', SBAR feedback is emailed to the learner. Their mentor, manager and the PDNs are copied in.

**SITUATION** Overview of events to provide context (patient acuity/stability).  
**BACKGROUND** Summary of the learner's previous experience and current course/competencies.  
**ASSESSMENT** Summary of observed practice and discussions.  
**RECOMMENDATIONS** Guidance tailored to the individual's identified needs.

**Result:** Over the last two years the introduction of the SBAR template has allowed us to deliver feedback using a standardised approach, which has been well received by learners, managers and mentors. We are in the process of devising a survey to evaluate the SBAR feedback model in more detail.

**Conclusion:** Using the adapted SBAR tool enables standardised delivery of feedback, using a structure which is easy to remember and simple to adapt. Learners quickly become familiar with the format and comfortable with the receipt of feedback. Mentors and managers are able to maintain an overview of the learner's progress. The SBAR tool helps keep 'assessments' factual and 'recommendations' tailored to the individual. It is a simple concept that could be easily adopted by other Practice Development teams.

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## P07: Using Quality Improvement Methodology to Support the Reduction and Cost of Routine Sampling Within ICU

**Yvonne Bryson, Aimee Watrett, Stephanie Frearson, University Hospital Crosshouse**

Purpose: The aim of this Quality Improvement (QI) initiative was to improve person centred care by reducing unnecessary blood letting and reduce cost of routine blood sampling within Intensive Care Unit, University Hospital Crosshouse by 30% by Dec 2019. We were interested in reviewing our current clinical practice to identify two main issues:  
 Do all ICU patients require all routine bloods to be obtained on a daily basis?  
 If we changed our practice would we offer improved person centred care and demonstrate cost savings.

Background/Significance: The current financial constraints within NHS Scotland and indeed locally within our own Health Board mean it is more important now than ever to explore all aspects of potential efficiency savings. Within our ICU routine blood tests on all patients were common practice and has been for a number of years. This led us to question if these were a necessary or essential diagnostic intervention for person centred care? Furthermore Gray and Baldwin (2014) suggest that unnecessary routine blood sampling may have a significant cost burden to healthcare providers.

Method: We recently embarked on a QI project to review our current practice of nurses obtaining routine bloods daily from all patients resident in ICU. Using the Model for Improvement we devised a driver diagram and employed PDSA methodology to test ideas for change. Initially we obtained costing's of each individual blood test and shared that amongst staff to raise awareness.

Staff were asked to consider, on a daily basis what bloods were required and why? We are now in the process of implementing a 'pro-forma' for medical staff to complete requesting specific bloods required for each patient. Additionally we are working on guidance aimed at medical staff to support them in decision making around appropriate blood sampling  
 No ethics approval was required for this project.

Result: Data was obtained prior to and following our awareness campaign with staff which was suggestive of a reduction in the number of routine blood tests being requested. We have requested and are awaiting further information from our Finance Manager with regard to demonstration of cost savings occurred as a result of this QI project

Conclusion: As highlighted previously we hope to demonstrate a link between reduced blood sampling and reduction in ICU costs from making subtle changes to practice and raising awareness. Equally important is the reduction of potential harm to patients and be able to offer a more person centred approach to ICU care. We plan to collect further data following the implementation of all our changes to practice which will hopefully capture improved outcomes.

This is still very much work in progress which we hope to develop further by reviewing other aspects of routine sampling in ICU and potentially highlight any areas for further improvement.

References:  
 Gray R and Baldwin F Targeting Blood Tests in the ICU may lead to a significant cost reduction *Critical Care* (2014) 18 (supp1) p15

## P08: Workplace Violence Against Nurses Working in Emergency Departments at Public Hospitals

**Kousar Parveen, Dilnasheen Safdar, National Institute of Blood Disease and Bone Marrow Transplantation**

Background: Work place violence is an alarming and devastating issue worldwide particularly in the emergency departments (Blanchar, 2011). Incident of work place violence is common towards nurses in health care settings. Nurses are more prone to workplace violence due to lack of respect towards nursing profession in Pakistani society and the nature of work performed by the nurses (Alameddine, Mourad, & Dimassi, 2015).

Aim: The main purpose of this study was to assess the

prevalence of work place violence including physical and non physical and bring awareness about work place violence among nurses at the emergency departments of health care systems.

Method: A cross sectional descriptive survey was performed to assess the prevalence of work place violence at tertiary care hospitals. A convenient sample of n=147 was used to collect the data. A structured standardized adopted questionnaire was used to collect data. The questionnaire consisted demographic, physical and non physical variables. The data was collected from tertiary care hospitals. The data was analyzed on SPSS version 21.

Results: It was found that 77.55% stated that they are not exposed to physical violence last 12 months, 13.6% said once, 7.48% said 2-3 times and 1.3% stated they have been exposed 4-5 times during last year. On the other hand the participants exposed to Nonphysical violence in last 12 months, 12.93% stated that they are not exposed to physical violence last 12 months, 25.85% said once, 40.82% said 2-3 times and 19.73% stated they have been exposed 4-5 times during last year. Most recent physical incident in which 10.20% of incidents were happened at resuscitation room 2.04% at waiting room and 10.20% in treatment room. The most recent nonphysical incident in which 38.10% of incidents were happened at resuscitation room 0.68% in triage 12.24% at waiting room and 37.41% in treatment room 0.68% in other places.

Implications for practice: The physical violence prevalence was found less than the nonphysical violence, but Physical violence is more threatening than the nonphysical violence.

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## P09: Investigating Reasons Why Patients Don't Attend Follow Up Clinic

**Joanne Outtrim, Joy McAdam, Jill Hyde, Cat Yates, Cambridge University Hospitals NHS Foundation Trust**

Purpose: The two critical care units at our regional referral hospital have been holding follow up clinics for patients admitted to intensive care for a number of years. Over the last 2 years attendance has been

disappointing with only 11% of patients attending. We undertook a service development project to try to find out why patients did not attend clinic.

Background/Significance: The National Institute for Clinical Excellence (NICE) published clinical guidance in 2009 recommending that critical care patients with rehabilitation needs be reviewed at 2-3 months post intensive care discharge, such as during a follow up clinic. Despite this guidance there has been limited development of clinics and a call for further evidence of their effectiveness.

Method: All eligible patients are invited to attend a follow up clinic staffed by an ICU Consultant and Clinical Nurse Specialist (CNS). We undertook a service review process we identified all eligible patients during a two month period, who had been invited to our ICU follow up clinics. After two weeks, we called all of those who had not already responded to the invitation letter. As part of the call we asked if they'd received the letter, given a brief description of the clinic, and asked if they'd like to attend the clinic, whilst documenting all responses.

Result: Of the 91 patients who had been invited to clinic, 16 had requested an appointment. Seventy five patients were then phoned at least twice, at different times of the week. Not all could be contacted, but those who were gave numerous reasons for not replying, including having made a good recovery, inpatient at another hospital, or feeling too ill to attend. Ten patients who were spoken to took up the opportunity to attend the clinic.

Conclusion: Despite NICE guidance recommending patients with rehabilitation needs being assessed 2-3 months after discharge, it is evident from our small project, that further work is required to facilitate clinic uptake.

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## P10: ABCDEF/Liberation Bundle

**Claire Gallacher, Celia Morales, Royal Brompton Hospital**

Purpose: The goal was to implement the ABCDEF Bundle into a dynamic ICU to liberate patients from the long-term problems associated with an admission to ICU.

A: Assess, prevent and manage pain  
 B: Both spontaneous awakening trial and spontaneous breathing trial  
 C: Choice of sedation  
 D: Delirium monitoring and management  
 E: Early mobility and exercise  
 F: Family Engagement and Empowerment

To change the culture in which we care for Adults in ICU. Moving away from deep sedation, immobilisation and restricted visiting: to patients being awake, alert, engaged and involved in the delivery of their care. Also encouraging open visiting for family members at the bedside and engagement in care delivery (Ely, 2017).

Background/Significance: The problem with current care is there are poor outcomes for AICU survivors - such as increased anxiety, depression, delirium, post-traumatic stress disorder (PTSD), critical-care myopathy, reduced quality of life and a higher risk of mortality also known as Post-Intensive Care Syndrome (PICS) (Weber et al, 2017). The literature states that bundle implementation improves the management of pain, agitation, delirium, reduced mechanical ventilation time, promotes early mobilisation, reduced length of ICU stay and reduced mortality risk (Pun et al, 2019).

Method: Service Improvement - Quality Improvement (QI) Project  
 Multidisciplinary approach - nurses, doctors, physiotherapists and pharmacists to implement the project.  
 Sample: all patients in ICU, safety screening tools used to determine if patients suitable for certain aspects of bundle (sedation hold/spontaneous breathing trial/mobilisation)  
 Setting: Adult ICU  
 Data Collection: Audits  
 Instruments: safety screening tools and validated pain, agitation and delirium tools were utilised.  
 Approval of the Trust and Managers in ICU.

Result: Ongoing QI project -  
 Awaiting results on length of ICU stay and length of mechanical ventilation time

Conclusion: Improved coordination of the MDT  
 Better use of validated tools to assess PAD (pain, agitation and delirium)  
 Recommendations: To increase bundle compliance/adherence in ICU

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## P11: Implementation of Critical Care Rehabilitation Service

**Catherine Lloyd, Sarah Long, Leeds Teaching Hospitals**

Purpose: The Care Quality Commission report for Leeds Teaching Hospitals Trust (LTHT) in 2016 stated that LTHT needed to review the provision of this rehabilitation support in line with CG83, as minimal specialist support was offered.

Background/Significance: Critical Care is an area of healthcare in which patient outcomes are very hard to predict. However extensive research (Rooney (2013), Wood (2015), has highlighted the long term physical and psychological effects for patients following admission which have a huge impact on the patient's quality of life.

NICE CG83 stipulates that all patients leaving Critical Care should be assessed to identify specific physiological and psychological problems, recognising the continuing rehabilitation needs they have.

Method: The Critical Care Rehabilitation service was implemented at SJUH in 2018, to provide follow up to patients who have been sedated and ventilated for >72hours.

The aim was to see patients for 45 minutes a day and assist with rehabilitation based on their specific needs. The team sets achievable goals to encourage the patients to be more proactive in their own care. Enhancing patient experience and reducing length of stay after Critical Care.

Result: The Critical Care Rehabilitation Service at SJUH on average has reduced length of stay by five days. Feedback forms received from patients at dischargehas

beenunanimously positive, highlighting an improvement in patient experience.

Conclusion: The decrease in length of stay and the feedback that the team has received from patients, relativesand staff has underpinned the essential need of this service for patients recovering from Critical Care.

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## P12: From Paper to Practice

**Sharon Norman, Cardiff University, Susie Henwood, Glangwilli General Hospital**

Purpose: To discuss the impact of academic learning on improving patient safety in critical care. The focus is reducing noise levels in ITU, to help reduce delirium in the critically ill ITU patients.

Background/Significance: Delirium leads to prolonged hospital admissions, cognitive deficiency following discharge, increased mortality and morbidity rates for critically ill patients (Lamond et al. 2018; Salluh et al. 2015). Sleep deprivation is a contributing factor for the onset of delirium. In a multi-centre study, peak daytime noise levels recorded above 100dBA and 85dBA at night (Darbyshire 2016). This exceeds WHO recommendations of 35 decibels and 30dBA (Berglund et al. 1999).

Method: A single-centre quality improvement project (QIP) was undertaken. Model for Improvement Framework (Institute for Healthcare Improvement [IHI] 2009) was used, aiming to reduce noise by 10% between 10pm-6am for ventilated patients by using rapid cycles. The improvement introduced decibel monitors at each bed area (with visual prompts) and educated staff about the problem. Quantitative data from the decibel monitor and an audit on episodes of reported delirium will be analysed.

Result: As this QIP is being implemented, at the time of the abstract submission deadline, audit data of the innovation for practice is pending. However, it is important to share learning and experience of the enablers and challenges met whilst implementing academic learning into clinical practice, related to this QIP. This will include experience of using the Model for Improvement Framework (IHI 2009), clinical approval

processes, funding of the project, and any data from the project we have come September's conference.

Conclusion: Our experience has shown that critical care nurses can use their academic learning to inform and influence their clinical practice. Academic learning can empower critical care nurses by equipping them with the knowledge, skills and confidence to gain support for projects and lead in improving patient care and outcomes.

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## P13: Preoperative Education in Elective Patients

**Emma Barlow, Ben Donne, Shirley Wright, Sheffield Teaching Hospital**

Aim: A trial of WebEx technology across Anglia BACCN  
 Purpose: To improve patient pre- operative education (POE) prior to their admission to critical care.  
 Overall goal of reducing anxiety by gaining an insight into what to expect in theirjourneythrough critical care.  
 POE improved patient satisfaction.

Background/Significance: A patient survey carried out on HDUhighlighted that patients and relatives did not expect monitors, alarms and different oxygen therapies. Previous research into the subject of POE has looked into the effect of length of stay, intubation days, and pulmonary complications among other factors. However most research suggests that there is a link between good preoperative education and decreased anxiety levels. In previous yearspatients were admitted into hospital the day prior to their surgery, and as an HDU nurse I would do a pre op visit to the patient on the ward, introduce myself, explain HDU and offer a walk around of the unit. Many things in modern day stop this from happening.

Method: For our data analysis a questionnaire was compiled that covered a process and outcome measure. Process 1-were patients offered pre op education, process 2-did they read/engage in the education. The outcome measure-appropriate patients who deemed

their pre-operative education effective. Elective patients having ILOG surgery, selected over 10 collection points were given a questionnaire.

Result: Baseline evaluation showed that there are reasonable levels of POE offered, only a third of these are For overall improvement in patient satisfaction an improvement needs to be made in both patients receiving POE and those engaging in POE.

Conclusion: We have produced a patient information video and booklet for elective patients. Educating pre op nurses, CNS and other MDT about the new patient information education tools. Currently involved in a pilot surgical school offering pre operative education to elective patients to improve pulmonary complications post op.

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## P14: Music Therapy in Intensive Care Unit

**Alisa Mendonca, London North West Healthcare University NHS Trust**

Aim: Music is a understudied intervention for mechanically ventilated critically ill patients with large benefits. Conscious and intubated patients in Critical Care are commonly subjected to high level of anxiety, agitation and pain related to intubation and clinical procedures, which could have a noxious impact on their clinical condition (Dewey et al, 2013). Traditionally, they were treated with increasing sedative use which amplified polypharmacy and their risk of delirium. Consequently, Devlin et al (2018) recommended the use of non-pharmacological adjuncts including Music Therapy to reduce pain, anxiety and delirium. Music therapy has been found to improve the emotional and physiological well being of patients in Intensive Care Unit (ICU). It helps eliminate the need for pharmacological interventions to control agitation , pain and anxiety .(Saasatmand,2015)

Background: Music therapy is a anxiety reducing , non invasive nursing intervention which helps patients cope with stress better in a stressful ICU environment.

- The Society of Critical Care Medicine, (2013) recommends the use of non pharmacological interventions acknowledging the fact that not many studies have been published. Music is a non pharmacological and inexpensive treatment which when initiated by the patient will give them a sense of control in a less controlled environment needs to be researched further.

Main Findings/Results/Discussion: - Moon Fai Chai et al 2008 recommended that music therapy could help reduce anxiety and promote better patient outcome.

- Linda L. Chlan et al (2013) revealed that music can decrease the pain and anxiety using the VAS score assessment tool and helped increasing the comfort level .
- Hatice Ciftci ,(2015) found that music not only reduces anxiety but also minimizes sedative exposure, which can help reduce cost and interestingly music could be self initiated by the patient.
- Chiu-Hsiang Lee et al.(2017) used cortisol as a biomarker to examine the effects of stress and anxiety in the mechanically ventilated patient.
- Overall all the studies prove that music therapy has a positive impact on mechanically ventilated patients in reducing the anxiety , pain and sedative exposure .Patients who receive less sedation would mean minimal adverse effects and patients could manage anxiety independently could help in future research studies

#### Conclusion:

- Music therapy is beneficial to critically ill patients receiving mechanical ventilator support as they are unable to communicate effectively which leads to anxiety, fear and stress and decline in one's health.
- Further research is needed in organising in-service training courses for nurses, so that music may be used as a non pharmacological tool by nurses in the future.
- Patients willingness and preference to music should be taken into account which help improve patients well being .
- Music therapy should be encouraged in every critical care setting as it is cost effective, simple and non invasive which results in better patient outcomes.
- However the use of live music was not studied, hence further research needs to be done to know if there is any possibility in reducing the anxiety levels.
- More nurse led researches based in the UK are recommended, to determine if music therapy can help reduce ICU stay, reduce medication cost, ventilator time and help improve post ICU experience.

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## P15: Aiming Beyond Survival: The Critical Care Rehabilitation Pathway

**Ana Katrina Evangelista-Lair, Brighton and Sussex University Hospitals NHS Trust**

The focus of this poster is to raise awareness and encourage collaborative discussions regarding the initiation, goal setting and implementation of the critical care rehabilitation pathway, as mandated by the NICE Clinical Guideline 83. It highlights the fact that more and more patients are surviving critical illness but experience significant physical, psychological and cognitive morbidities upon discharge, ultimately affecting their quality of life as well as their families. Early and structured rehabilitation can improve short term outcomes and long term recovery for this patient group. It outlines the role of the ICU nurse as a professional and member of the multidisciplinary team in improving outcomes and survivorship of ICU patients.

Learning Objectives: By the end of the presentation, the critical care nurse will be able to:

1. Learn to assess and identify patients at high risk of developing physical and non physical comorbidities during and after ICU admission;
2. Participate (as a professional and member of the multidisciplinary team) in the development and implementation of short, medium and long term rehabilitation goals and activities for high risk patients;
3. Identify the communication and non technical skills needed to support patient undergoing rehabilitation and their families.

## P16: Service User Involvement to Strengthen the Governance Process of Incident Reporting, Understanding What Happened and Wider Shared Learning

**Sarah Jones, Kay Sybenga, Michelle Hunter, NHS Blood and Transplant**

Purpose: The aim of this service improvement project was to gain feedback and comments from a wide range of users to streamline and strengthen the process of incident reporting, investigating and sharing learning.

Background/Significance: The clinical governance process had never been reviewed from a user perspective previously. To be effective and achieve the outcome of enhancing patient safety and quality, changes cannot be made in isolation; service users are integral to the clinical governance process redesign.

The Berwick Report (2013) "A promise to learn - a commitment to act: improving the safety of patients in England" highlighted that the "most important single change in the NHS in response to this report would be for it to become, more than ever before, a system devoted to continual learning and improvement of patient care, top to bottom and end to end."

Method: A number of questions via SurveyMonkey were sent to key stakeholders from across the pathway requesting feedback on all aspects of the clinical governance process.

Result: The results demonstrated responses from a wide range of healthcare professionals across the organ donation and transplantation pathway:

- Donation
- Retrieval
- Transplantation
- Transplant Support Services
- Laboratories
- Admin Support Services
- Other

The findings highlighted areas for improvement and user recommendations in relation to the incident investigation, the outcome responses and the wider shared learning.

Conclusion: A number of changes have been made:

1. Suggested electronic incident reporting form changes
2. Investigation Summary template
3. More sharing of incidents across the community to encourage shared reflection and learning
4. Evidence of implementing change

Overall the results were reassuring that a positive and transparent culture of incident reporting and sharing learning is developing. As Berwick (2013) highlights “rules, standards, regulations and enforcement have a place in the pursuit of quality; but they pale in potential compared to the power of pervasive and constant learning.”

#### References:

R. Berwick 2013, A promise to learn - a commitment to act: Improving the Safety of Patients in England (online) available at: <https://www.gov.uk/government/publications/berwick-review-into-patient-safety> (accessed 12.02.19).

## P17: Service Evaluation of The Bereavement Care Delivered in An Intensive Care Unit

**Daniel Harris, Petra Polgarova, Lisa Enoch, Cambridge University Hospitals (CUH)**

**Purpose:** The purpose of this service evaluation was to explore the experience and thoughts of all clinical staff (nurses, doctors and allied health professionals) on bereavement care.

**Background/Significance:** Losing a loved one in the Intensive Care Unit can be a traumatic experience (Kentish-Barnes, et al., 2017). The literature highlights relatives of patients who have died in the Intensive Care Unit can experience symptoms of stress, anxiety, depression, post-traumatic stress disorder and prolonged grief (Buckley, et al., 2015).

**Method:** The questionnaire was introduced to all ICU staff by work-based email, staff Whatsapp and Facebook groups. All staff received the link to access the anonymous online survey. Staff who were willing to participate completed the questionnaire via survey monkey. No incentives were offered.

**Result:** 18.4% responded out of a potential 190 respondents. This service evaluation found five main themes: dignity and respect, care, support, information and memory making. Bereavement care is described by both nurses and doctors as after death care. However, participants stipulated that bereavement care should be discussed prior to death occurring. Participants described using varying interventions such as: memorial services, condolence letters, follow-up meetings, diaries, etc. Interestingly the medical staff highlighted communication as their main, but often only role in bereavement care.

**Conclusion:** Bereavement care was regarded an

important aspect of the end of life care delivered in ICU. It was evident that participants strived to deliver an holistic approach when providing bereavement care yet some still found it difficult. This service evaluation has highlighted areas we now need to develop. We plan to: roll out a series of educational activities (including children support), re-evaluate in one year and review our bereavement policy.

#### References:

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## P18: Standardised Algorithm: Communication Strategies for Conscious Mechanically Ventilated Patients

**Saedne Shane Rogando, Addenbrookes Hospital & Cambridge University Hospitals NHS Foundation Trust**

**Purpose:** The aim is to explore the current communication strategies and develop a standardised algorithm for selecting the most appropriate communication tools with conscious mechanical ventilated patients in promoting individualised and quality patient care.

**Background/Significance:** Neurosciences Critical Care Unit of Addenbrookes Hospital is a major trauma centre and referral unit for patients from United Kingdom and all over the world. Over 900 patients each year has been treated in NCCU with majority with neurological illness or brain injury. Around 70% of patients are admitted ventilated and needed long-term intubation.

In contemporary health care, there has been a strong emphasis on patient-centeredness and individualised care. The challenge of effective communication with ventilated patients due to their lack of ability to speak, sedation, motor and cognitive impairment leads to greater anxiety and frustration for both patients and nurses. Assessment of patient communication needs is often times neglected due to prioritising of physiological needs. It is important to develop awareness and train staff to choose the appropriate tool for improving the patient's journey while in intensive care.

**Method:** Exploration of standardised algorithm in collaboration with multidisciplinary team. Questionnaire survey for nurses, to explore the effect of the algorithm to current practice.

**Result:** Patient's experience will be evaluated using appropriate communication tools chosen and evaluation of nurse's experience in using the algorithm via questionnaire. Effective patient care is not limited to improve patient outcome but this is also indicated by patient satisfaction in the care they are receiving.

**Conclusion:** Communication strategy will not be limited but will be able to give an opportunity to discover more augmentative and alternative communication tools. The purpose of an algorithm is to give patients and health care professional method to meet halfway and to properly assess and identify the individual communication patient needs.

#### References:

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## P19: Humanising Critical Care

**Susie Lawley, Gateshead Health NHS Trust**

**Purpose:** Humanising the critical care department to improve the care of patients, relatives and staff.

**Background/Significance:** It is widely recognised that critical care environments are extremely pressured and medicalised. This can lead to the process of dehumanising

patients for example referring to them as bed numbers or conditions rather than their name.

Combined with delirium this can make critical care departments a very frightening place for patients.

Staff can also become desensitised to the human element of patient care when facing pressures of workload and potential burnout. Shift patterns can lead to staff not getting to know patients and families as they care for people in a fragmented way.

**Method:** In the critical care department at QE Gateshead new initiatives have been introduced to counteract this process of dehumanising.

Over a year ago open visiting was implemented to allow relatives to visit at any time. 'Introduction to me' leaflets are being used for all intubated patients.

Since last year a live musician has visited every month to play the ukulele which has been very enjoyable for all. This year an ex patient who has been actively involved in the local ICU steps group has started as a volunteer in the department - he is available to talk to relatives, staff and patients.

There is a therapeutic activities box on the department with items ranging from playing cards to nail varnish to crossword books.

In the future I would like to introduce therapy dogs visiting the department and develop some private garden space in the hospital.

**Result:** Feedback from staff, relatives and patients has been positive for all these interventions.

**Conclusion:** I hope that we will see more efforts to humanise critical care nationally to the great benefit of all.

#### References:

Wilson, M E et al (2019) Humanizing the intensive care unit *Critical Care* 23:32  
Brown S M et al (2019) The Practice of Respect in the ICU *ATS Journals* 197:11

## P20: Animal Assisted Therapy in Adult Critical Care

**Valentina Sciacca, Royal Brompton & Harefield NHS Foundation Trust**

**Purpose:** The process of implementing animal assisted therapy (AAT) on AICU started with a literature review of

AAT in Adult Critical Care. The purpose is to implement AAT as a therapeutic intervention. AAT supports relationship-based care, which puts the patient at the centre and integrates the patient and family's spiritual, cultural, emotional and physical priorities into the plan of care using a holistic approach (Waite et al, 2018).

**Background/Significance:** It is part our unit ethos that the concept of "family" should reflect personal and societal changes, and for some patients this may include their pets. As ICU nurse I've experienced that some patients considers their pet to be a member of their family, and in some cases to be the individual closest to them. We Believe that healthcare professionals should facilitate AAT, as part of a patient and family-centred approach to care in order to reduce risk of anxiety, depression and PTSD in survival ITU patients (Kamioka et al, 2014). Literature say that AAT lead to positive results: decrease in pain and anxiety in patients and increase willingness in ambulation In CHF patients.

**Method:** We implemented Pet visiting at first in 2018, where 2 patients in the end of their life and 1 long term patient met their own pet: we received extremely positive feedback from patients, staff and relatives and gave us unforgettable and emotional moments.

**Result:** The implementation of this project as with all changes faced some challenges, however we created Guidelines for AAT in AICU which has been approved by the local guidelines process.

**Conclusion:** Our AAT project was mentioned as an outstanding feature in our CQC reports in March 2019, as enhanced patient experiences and delivered an outstanding patient- centred quality of care. Future implementation of AAT will look at perform surveys and collect quantity and quality data to analyse.

#### References:

Waite, T., et al (2018) 'A meta-analysis of Animal Assisted Interventions targeting pain, anxiety and distress in medical settings', *Complementary Therapies in Clinical Practice*.

Kamioka, H., et al. (2014) 'Effectiveness of animal-assisted therapy: A systematic review of randomized controlled trials', *Complementary Therapies in Medicine*, (22), pp 371-390

## P21: Applying Mouth Care Matters in Critical Care

**Julie Nichols, Maria Milburn, Royal National Orthopaedic Hospital**

**Aims:** The poster presents the findings of a rapid review of the literature review examining factors affecting nurses' delivery of oral hygiene in adult critical care.

**Background:** Mouth Care Matters (Doshi 2016) is a national initiative being implemented in the critical setting of a National specialist Orthopaedic NHS Trust Critical Care Unit in London, England.

**Method:** A rapid review of the literature (Moher et al., 2014) was undertaken. Relevant studies were identified using the databases OVID and EMCare using search terms: mouth-care; oral hygiene; mouth hygiene; ventilated patient; intensive care nursing; critical care nursing and multi -organ failure. The search was limited to peer reviewed studies or reviews published 2008-2018 in English on adult patients. Thirteen primary studies and/or systematic reviews met the inclusion criteria. The findings of included studies subjective to narrative synthesis. In line with rapid review methodology, no formal critical appraisal was performed.

**Findings:** Most studies investigating oral hygiene focus on the prevention of ventilator associated pneumonia (VAP) (Xie et al., 2013) rather than other outcomes such as patient comfort and links with nutritional status. Few studies discuss the factors affecting nurses' oral hygiene practice. Findings suggest that protocols are useful but a number of barriers to nurses' provision of mouth care in critical care were identified. These included: no agreed protocol, lack of equipment, lack of supplies and insufficient time for doing mouth care.

**Implications for Practice:** Despite evidence of its impact on VAP and other health outcomes, optimal oral hygiene provision is not always provided by nurses in critical care. Review findings are currently informing a quality improvement programme, examining local practice and implementing the Mouth Care Matters initiative in our critical care unit.

#### References:

Doshi, M (2016) Mouth Care Matters. Health Education England. Available online: [http://www.mouthcarmatters.hee.nhs.uk/work-content/uploads/2016/10/MCM-GUIDE-2016\\_100pp\\_OCT-16\\_v121.pdf](http://www.mouthcarmatters.hee.nhs.uk/work-content/uploads/2016/10/MCM-GUIDE-2016_100pp_OCT-16_v121.pdf)

Shi, Z., Xie, et al (2013) Oral hygiene care for critically ill patients to prevent ventilator-associated pneumonia (Review). *Cochrane*

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Available online: <http://training.cochrane.org/resource/introduction-rapid-reviews>

## P22: Diagnostic Blood Loss: Incidence and Outcome of Hospital-Acquired Anaemia in The Neuro Intensive Care Unit (NCCU)

**Peter III Jabines, Joanne Outtrim, Louise Roberts, Irvin Michael De Guzman, Rosanna Hopkins, Addenbrookes Hospital**

**Purpose:** It has been identified that our current practice of obtaining blood samples in our Neuro Intensive Care Unit may be contributing to Hospital-Acquired Anaemia (HAA), and that a review of our current practice may lead to improvements in patient outcome and also reduce the financial costs to the Trust.

**Background/Significance:** Hospital-Acquired Anaemia is a common condition affecting all critically ill patients (Hayden et al, 2012). It has been estimated that patients in ICU can lose up to 40 - 50 ml of blood on daily diagnostic exams, and those with an indwelling catheter lose up to 900 ml of blood during their length of hospital stay (AACC, 2016).

HAA is associated with increased morbidity and length of hospital stay (Anil et al.2018). In the absence of clinical guidelines for requesting blood sampling, current practice is based on the clinicians' preference and for clinically stable patients it could be argued regular sampling is for the clinicians benefit and not patient benefit.Â

**Method:** As part of a service evaluation, we will undertake a review of 100 aneurysmal subarachnoid haemorrhage (SAH) patients admitted to the Neuro Critical Care Unit (NCCU), with data extracted from electronic medical record. We would aim to investigate the difference of baseline haemoglobin levels to those upon discharge. As part of this we would collect data such as basic demographics, reason for admission, number of blood samples taken during the admission and interventions to correct the anaemia that were received by the patients.

**Result:** The results of this study will reflect the trend of patients' hemoglobin levels from admission to discharge, the frequency and type of blood sampling used and the interventions undertaken to correct the anaemia.

**Conclusion:** It is anticipated that the findings from this service evaluation will review our current practices, provide evidence to develop clinical guidelines and

identify potential cost savings for the organisation.

#### References:

Hayden, J., Albert, J., Watkins, R., and Swenson, R., Anemia in Critical Illness Insights into Etiology, Consequences, and Management, *American Journal of Respiratory and Critical Care Medicine*, viewed 27 March 2019, <<https://www.atsjournals.org/doi/full/10.1164/rccm.201110-1915CI>>.

Noguez, J., Tackling Hospital-Acquired Anemia Lab-Based Interventions to Reduce Diagnostic Blood Loss, *American Association for Clinical Chemistry*, viewed 27 March 2019, <<https://www.aacc.org/publications/cln/articles/2016/april/tackling-hospital-acquired-anemia-lab-based-interventions-to-reduce-diagnostic-blood-loss>>.

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## P23: Pain Assessment in ICU - Post Operative Wound Care

**Ines Alexandra Esteves Sadoc Pereira, The London Clinic**

**Purpose:** Patients with complex surgical wounds described this as being the most debilitating aspect of their life and, in ICU, prolonged stays have been the result of multiple surgical wound debridement interventions; frequent septic episodes and the need for specialist pain management.

A surgical site infection is associated with high mortality rates as it places the individuals at increased risk of sepsis and it is the most common post - operative incisional complication with, at least, 5% of the patients being affected (Wounds UK, 2017).Clinical judgement will be, then, paramount to interpret verbal and non-verbal signs of pain (Swanson et al, 2014) as, even at early stages of infection, pain related to the wound site is present.

**Background/Significance:** These cases have raised several challenges to nursing care and became the focus of my work during a wound management course. My dual role as a Senior Staff Nurse in ICU and Tissue Viability Nurse alerted me to the need of improving patient pain assessment related to post-operative wounds and, fortunately, I was able to develop this project in collaboration with the Tissue Viability Nurse Specialist, Pain Team Lead Nurse and ICU Manager and Clinical Educator.

The RCN Pain Knowledge and Skills framework (2015) states that nurses should follow current guidelines for

pain assessment and management; recommendation also made by IASP (2004): "healthcare professionals should understand the mechanisms and types of pain and any influencing factors on the patient's perception of pain." (Edwards, J., 2013). Despite vast technological advances, extensive research and the existence of effective pain relief strategies (Bell, L; Duffy, A., 2009), pain assessment is still suboptimal (Chung and Lui, 2003; MacLellan, 2004; Klopper et al, 2006 in Bell, L; Duffy, A., 2009); Lack of time and increased workload are common reasons given by healthcare professionals for poor pain assessment and management in practice (Bell, L; Duffy, A., 2009) but, I believe that nurses should provide holistic care (RCN, 2015): including patient empowerment; promoting patient active participation in their journey; whilst preventing post-operative complications.

Method: Therefore, using Gibbs Reflexive Cycle I have designed a new Pain Assessment Form - related to post-operative wounds. Prior to launching the form, I will educate staff regarding the project objectives and I will also raise awareness on how imperative it is to improve our practice as this has a major impact on patient's quality of life. Equally, accurate documentation will be cultivated as it produces consistent pain assessment and management (Taylor, A., 2010).

Result: I will continue this project by assessing the outcomes linked to patients' experience in ICU throughout a qualitative method and nursing compliance with pain assessment on the post-operative period throughout a quantitative method.

Conclusion: In conclusion, changing institutional practices is a continuous and slow process, but interdisciplinary collaboration, long-lasting transformations and improvements in the quality of pain management are worth the effort (Bell, L; Duffy, A., 2009). By the time of the presentation I will have the data mentioned on the result and will be able to determine future research needs.

References:  
Bell, L; Duffy, A. (2009) Pain assessment and management in surgical nursing: A literature review Article. British Journal of Nursing, Volume 18 (3), pp. 153 - 156.  
Taylor, A. (2010) Principles of Pain assessment. Wound essentials, Volume 5, pp. 104 - 110.  
Swanson et al (2014). Wound Infection Made Easy. Wounds International. Available from: www.woundsinternational.com

## P24: Temperature Measurement in Acquired Brain Injury Patients in Neuroscience Critical Care: A Review & Benchmarking Initiative Towards Standardization

**Irvin De Guzman, Peter John Jabines, Joanne Outtrim, Louise Roberts, Cambridge University Hospitals FT**

Purpose: This project aims to evaluate patient temperature assessment techniques used by NHS trauma and neurocritical care centres for patients with Acquired Brain Injury (ABI). Results will be used to standardize practice within a regional referral neurocritical care unit (NCCU) in line with evidence-based guidelines.

Background/Significance: Temperature is one of the fundamental parameters directing clinical management in ABI & Critical Care patients (Faulds & Meekings, 2013). It is vital that a uniform route is ensured in temperature assessment to maximize precision and facilitate stark comparability (Hooper et al., 2010). In our NCCU, different thermometers are available for various assessment routes. These devices, however, often produce dissimilar readings. This can lead to detrimental repercussions, especially on patients on targeted temperature therapy (McCallum & Higgins, 2012).

As a response to a NPSA guidance stating that the method for taking patient temperature must be clearly identified (NICE MIB99, 2017), we plan to review the current practice in thermometer usage in neurocritical care and trauma units across the NHS.

Method: We will contact major trauma and neurocritical care centres in the UK to ask about their current procedure in temperature measurements for ABI patients. Thermometer routes and systems used for normothermia and targeted temperature therapies will be compared. Countermeasures against potential discrepancies on core temperature monitoring will also be appraised, as well as incidents resulting in patient safety compromise, if present. Local guidelines will be evaluated and benchmarked against evidence-based studies.

Result: Survey results will be analysed to determine the most widely employed temperature measurement methods and practice. Guidelines will be reviewed to summarize the overall practice in the NHS.

Conclusion: Results will serve as an evidence base for the creation of a local policy establishing the most precise and practical method of temperature monitoring

to ensure patient safety and influence better patient outcomes.

References:  
Hooper, V., Chard, R., Clifford, T., Fetzer, S., Fossum, S., Godden, B., Martinez, E., Noble, K., O'Brien, D., Odom-Forren, J., Peterson, C., Ross, J. and Wilson, L. (2010). ASPAN's Evidence-Based Clinical Practice Guideline for the Promotion of Perioperative Normothermia: Second Edition. Journal of PeriAnesthesia Nursing, 25(6), pp.346-365.  
Faulds, M. and Meekings, T. (2013). Temperature management in critically ill patients. Continuing Education in Anaesthesia Critical Care & Pain, 13(3), pp.75-79.

## P26: 'Deep Dive' Reviews; A Different Way of Learning from Incident Reports

**Jeanette Foley, Claire Mitchell, NHS Blood and Transplant**

uPurpose: The overarching aim of each deep dive is to strengthen current processes and highlight areas that need further focus.

Background/Significance: Incidents relating to Organ Donation and Transplantation are hugely diverse, often complex and multi-factorial. Some reports that were 'investigated' in the traditional sense highlighted no real learning or solutions, increased workload, and potentially took individuals away from clinical care. To be more effective, it was agreed to explore a new method of reviewing certain types of incident reports.

Method: Learning from other areas, the concepts of both 'deep dives' and 'thematic reviews' have been developed for certain reports.

Details and facts are still collated, however by stepping back from the individuals involved it takes away any ability to blame as the focus is on the wider learning; the 'why' and 'what' rather than the 'who'.

Each deep dive is led by ODT Clinical Governance and all key stakeholders are involved, this is crucial to ensure things are seen through the eyes of all involved.

A deep dive occurs every two months and the cases are mapped through bringing out key questions, further 'diving', suggestions to strengthen practice or processes and future recommendations.

Result: So far there have been 4 'deep dives'. The learning from these has far exceeded, not only what would have been gained from the previous way of

reviewing, but also the expectations of those involved.

There have been a number of significant actions taken forward, highlighting the benefits of the change. Conclusion: Recurrent reports with similar themes are now used by the ODT Clinical Governance Team as an alert that neither the root nor the common causes are being identified. The early findings suggest that the concept of investigating a small number of reports, in-depth, and in a proactive way, will be significantly beneficial for all; patients, donor families and staff.

References:  
1 NHS Improvement. (2018) The future of NHS patient safety investigation: engagement feedback (online) available at: [https://improvement.nhs.uk/documents/3519/Future\\_of\\_NHS\\_patient\\_safety\\_investigations\\_engagement\\_feedback\\_FINAL.pdf](https://improvement.nhs.uk/documents/3519/Future_of_NHS_patient_safety_investigations_engagement_feedback_FINAL.pdf) (accessed 08/02/2019)  
2 Care Quality Commission. (2016) Learning from serious incidents in NHS acute hospitals (online) available at: <http://www.cqc.org.uk/content/briefing-learning-serious-incidents-nhs-acute-hospitals> (accessed 08/01/2019)

## P27: Using Human Factors Tools in Clinical Governance Within ODT

**Michelle Hunter, Claire Mitchell, NHS Blood and Transplant**

Purpose: Following a trend of clinical incidents, it was agreed to use a Human Factors approach to observe processes, particularly looking at external factors and influences.

Background/Significance: In 2016, the Care Quality Commission recommended to "move the focus of investigation from the acts or omissions of staff, to identifying the underlying causes of the incident" and "use Human Factors principles to develop solutions that reduce the risk of the same incidents happening again"<sup>1</sup>.

Human Factors are how the people within the organisation interact with the hardware, software and each other when completing a task therefore "Day to Day Observations" was used to identify areas of good practice and where improvements could be made.

Method: A human factors audit tool was devised following training by NHSBT Continuous Improvement. The group consisted of:  
- 2 managers  
- 2 administrators  
- 2 independent observers

Twenty-one observations were completed (maintaining a usual working environment) over three days to incorporate all teams.

Result: The observations were collated for each behaviour observed and the results demonstrated how Human Factors impact on the donor family letter process including areas of good practice. The findings showed that additional steps were undertaken due to the lack of accurately documented information regarding donor keepsakes and family addresses.

Conclusion: A number of actions were identified:

- Changes to the SNOD to DRD handover form, making communication clearer
- Regional Link Nurses, shared the importance of clear documentation
- Agile working was discussed at the Local Management Group meeting to review centre guidance
- Delays unarchiving donor files were reported and changes will be implemented as part of wider review

Good practice was highlighted, resulting in the implementation of Team Leader meetings to review regularly .

Due to the benefits of this review, Human Factors observations will be rolled out in other areas of ODT to strengthen processes.

References:

1. Care Quality Commission. (May 2017) Briefing: Learning from serious incidents in NHS acute hospitals. (online) available at <http://www.cqc.org.uk/content/briefing-learning-serious-incident-nhs-acute-hospitals> (accessed 11/02/19)
2. Miller, A. (2016) Power point presentation adapted from: Introduction to Human Factors e-learning package - SHINE Academy. (online) available at <https://nhsbt.traineeasy.com/enterprise/login/index.php> (accessed 11/02/19)

## P28: Supporting Additional Learning Needs in Organ Donation Education

**Susan Lee, NHS Blood and Transplant**

Purpose: NHS Blood and Transplant facilitate a unique and award winning training programme to take trainee Specialist Nurses in Organ Donation from beginner to competent practitioner over a 6 month period. It involves cohorts of new recruits following a programme that includes residential module weeks, use of high fidelity simulation centres, one to one supervision in clinical practice and online training. The author identified that as a professional development team, we were at risk

of not fully meeting our learners needs as we were not acknowledging or supporting additional learning needs that may exist within our cohort of trainees.

Background/Significance: The British Dyslexic Society suggest that 1 in 4 of the population is dyslexic. Assessment of any additional learning needs of trainee specialist nurses organ donation was not undertaken, and the team of professional development specialists were unaware of these needs unless the trainee raised it themselves. Simple adjustments could be made to enhance the learning experience of those with dyslexia, that would not adversely affect other learners.

Method: Research into dyslexia and other additional learning needs that may commonly be encountered was undertaken. This included hearing impairment and dyscalculia alongside dyslexia. Existing organisational policies were reviewed, along with RCN guidance. Suggestions for simple adjustments were created into a handbook for the professional development team and presented.

Result: Response from the Professional Development team highlighted a lack of awareness of the prevalence of dyslexia, and the impact it may have on learners. Confidence was raised through information sharing. Suggestions for adjustments to our structure of learning were made, such as colouring on presentation slides, handouts being provided pre sessions. The positive attributes of those with a dyslexia were very much recognised and celebrated.

Conclusion: Practice within the Professional Development Team has changed to be more inclusive to those with additional learning needs. Confidence has increased in knowledge by information giving. Further work in additional fields such as dyscalculia would be beneficial.

References:

Dyslexia, Dyspraxia and Dyscalculia. A Toolkit for Nursing Staff. 2010. Royal College of Nursing. London.

## P29: Putting Your Heart into a Nurse Led Role

**Susan Lee, Claire Roberts, Edward Davies, NHS Blood and Transplant**

Purpose: Organ donation is a complex area of healthcare therefore nurses working in this field need to be highly skilled and trained to help address the imbalance between the demand for organs for transplant and the supply from organ donors.

Background/Significance: A literature search found inconsistencies in training for Specialist Nurse's - Organ Donation (SNOD) prior to 2000, a national training program was first delivered in 2004 however variability in training across the 12 Organ Donation Services Teams (ODST) within the UK was still observed until the introduction of the cohort induction training in 2014. Recommendations from Department of Health, National Institute for Clinical Excellence and NHS Blood and Transplant guidance and strategy's support this; which reiterated families would be approached by highly skilled and trained nurses.

Method: SNODs have mainly been employed from Critical Care (CC) environments to manage the care of potential organ donors, however not all nurses had CC experience therefore all nurses are trained to achieve the same standard. All SNODs commence employment at the same time, the average training period for SNOD is six months. During this time the SNODs will orientate to their ODST and complete a standardised training program.

Result: A core competency framework underpins four theory week-long training modules which are designed internally, delivered nationally and provide consistency, where SNODs focus on the key aspects of the donation process supported by the Professional Development team and the regional Team Managers.

Conclusion: The module weeks are designed so learning is manageable, allows the time and values reflection and new SNODS will have already demonstrated a commitment to learn. Every opportunity has been taken to ensure the learning environment is based on important aspects such as safety; physical and emotional, relationships; respect, engagement and leadership, teaching and learning; support, professional relationships and the physical environment.

References:

Department of Health (DH) (2008) Organs for Transplants: A Report from the Organ Donation Taskforce; London: Department of Health  
National Institute for Health and Clinical Excellence (NICE) (2011) Organ donation for transplantation: improving donor identification and consent rates for deceased organ donation  
NHS Blood and Transplant (NHSBT) (2013) Taking Organ donation to 2020: A detailed strategy; London: NHS Blood and Transplant

## P30: Flexible, Blended Learning- Meeting the Challenge of Workplace Learning

**Angela Hall, Grace McMahan, East Kent Hospitals University Foundation Trust**

Purpose: As members of the Trust Deteriorating Patient Collaborative, an opportunity arose to evaluate current training programmes and to pose the questions 'Can we do this differently?' 'How can we reach and educate more staff?

Background/Significance: Several reports published in response to deteriorating patients advocate that staff training programmes be implemented to equip staff with the competencies required to recognise and escalate the deteriorating adult patient. ( NICE. 2007). Where clinical demands are high and with a workforce increasingly composed of junior inexperienced staff, combined with frequent turnover of staff, the delivery of these training programmes have remained a challenge for Critical Care Outreach Teams.

Method: The authors, learning lessons from mainstream education in schools and universities, created a virtual classroom, to deliver the elements of the deteriorating patient programme. The authors recognised that the programme needed to reflect a wide range of learning styles and ages. The programme delivers aural, visual and kinesthetic learning principles. An online quiz at the end of each section is used for assessment purposes. The programme utilises existing resources and expertise of a CCOT ward facilitator, and ward based PDN. Weekly tutorial sessions are provided for face to face questions

Result: The pilot study at time of writing is ongoing. At the completion of the pilot an evaluation survey will be carried out with the participants. An expected outcome is that all newly qualified staff in the last 10 years will find this approach intuitive as they have experienced this style of learning at university.

Conclusion: The authors anticipate an increase in the number of staff accessing training with a reduction in time spent delivering formal classroom courses. The authors anticipate that the virtual classroom will sit alongside classroom based practical sessions, staff being expected to complete online theory learning before attending practical sessions for topics such as NIV.

References:

Cook DA, Levinson AJ, Girsid S, Dupras DM, Erwin PJ, Montari VM. (2008). Internet based learning in the health professions: a meta-analysis. JAMA Network. 300 (10), pp1181-96  
National Institute Clinical Excellence. (2007). Acutely

ill adults in hospital: recognising and responding to deterioration.

National Patient Safety Agency. (2007). Recognising and responding to early signs of deterioration in hospitalised patients.

### **P31: In-Situ Simulation: Our Experiences**

**Benjamin Harold, Chelsea & Westminster Hospital NHS Foundation Trust**

Purpose: The impetus for the project was to provide education opportunities in the management of airway emergencies by ICU staff after a few incidents had occurred in the ICU. The author along with support from senior nursing and medical staff proposed that a multidisciplinary in-situ simulation programme be developed within the general and burns ICU.

Background/Significance: Sørensen et al's (2017) review on different forms of simulation training highlights that in-situ simulation advantage over other forms of simulation training is the ability for greater learning at an organisational level, e.g. testing a protocol or ensuring equipment is readily available.

Method: We implemented a monthly in-situ simulation programme for the multidisciplinary team, this session has been run monthly for over 2 years. The hour session involves a clinical scenario team and a debrief session with the whole team using a narrative approach.

Result: We have encountered a number of challenges when running the programme and these have led to changes in how sessions are practically conducted. These challenges have included lack of availability of staff, over availability of staff and lack of an available space to run sessions. Evaluations gathered from participants at each session continues to be extremely positive. Participants have identified future topics for clinical scenarios many of these are suggested because of incidents that have occurred in clinical practice.

Conclusion: We continue to run the in-situ simulation sessions on a monthly in order to provide staff with the opportunity to develop both technical and non technical skills within a realistic multi professional environment. We have written a number of clinical simulation scenarios and have found solutions to running the programme that could be developed into a package that could be shared with other ICUs to develop their own in-situ simulation programme.

References:  
Sørensen et al. (2017) Design of simulation-based

medical education and advantages and disadvantages of in situ simulation versus off-site simulation. BMC Medical Education 17:20

### **P32: Critically Collaborating for Research: The Development of a National Critical Care Research Network for Nurses/AHPS**

**Clair Harris, Guys & St Thomas' NHS Foundation Trust, Sian Birch, King's College Hospital, Matthew Barclay, Guys & St Thomas' NHS Foundation Trust, Bronwen Connolly, Guys & St Thomas' NHS Foundation Trust, Suzanne Bench, London South Bank University, Pam Ramsay, Edinburgh Napier University, Natalie Pattison, East and North Hertfordshire Trust, Sally Humphreys, West Suffolk NHS Foundation Trust**

Purpose: To develop a novel national network across the UK - between leading Non-Medical Researchers (NMRs) and Research Coordinators (RCs), supported by key stakeholder organisations/groups.

Background/Significance: Nurses and Allied Health Professionals who lead or coordinate research are pivotal to increasing the breadth of critical care research. Despite increasing numbers of such staff, there is no national representative group and many continue to work in relative isolation

Method: The planned stages for introduction were underpinned with an organisational development approach

- (1) Consultation phase including stakeholder engagement
- (2) Data collection to characterize priorities and functions of the network
- (3) Development of group terms of reference, organisational structure and formal objectives
- (4) Launch and implementation

A closed question on-line survey was designed to scope engagement and refine priority setting.

Result: There were 160 respondents to the survey. Two thirds of respondents had a background in nursing, another third were AHPs. Two thirds were working in a clinical capacity with another third made up from academic backgrounds. Approximately half the respondents were either chief, principal or co-investigators. 70-80% of respondents had experience in the implementation phase of research (screening, recruitment & consent, completion of CRFs, etc) with a 40-60% involved with the pre/post work (protocol

development, ethics/R&D, data analysis, write-ups, etc). Around two thirds had access to local peer support and around half had a research manager or research & innovation department for advice/guidance. Less than a third of respondents had access to other forms of support.

The most valued aspects for a future research network were building links through a network of peers, a discussion forum and collaborative research opportunities. Links to resources around training, guidelines, career progression, etc were also valued but to a lesser degree.

Conclusion: Overwhelming support for the concept, rationale and implementation of the network has been established and roll-out is underway.

References:  
Argyris, C.; Schon, D. (1978), Organizational Learning: A theory of action perspective, Reading MA: Addison-Wesley, ISBN 0-201-00174-8

### **P33: The Role of The Critical Care CNS**

**Cat Yates, Jill Hyde, Jo Outtrim, Joy McAdam, Addenbrookes Hospital**

Purpose: To demonstrate the unique role of a Clinical Nurse Specialist (CNS) team, working across two Critical Care Units in a large Major Trauma Centre hospital.

Background/Significance: After a patient leaves ICU the prospect of mere survival is no longer acceptable. The optimisation of recovery must be the objective (NICE, 2009).

Survivors of critical illness may develop a spectrum of conditions that include acquired weakness, cognitive dysfunction, delirium, depression, anxiety, and intrusive memories, a condition defined as Post-Intensive Care Syndrome (Mikkelsen, et al, 2016). A poor quality recovery post-ICU has consequences for families and society in general, and should be regarded as major public health issue (NICE, 2009).

Method: In 2015 a CNS team was employed to implement the 'Rehabilitation after critical illness' CG83 guidance (NICE, 2009). This guidance focuses on the optimisation of recovery post-ICU, both the 'physical' and 'non-physical' (cognitive/psychological) domains.

Initially the role focused on conducting individual patient rehabilitation assessments at admission and discharge from ICU, on the general wards, and during an out-patient Follow-Up clinic.

The role has developed and the team also provide a supportive role to patients and families including

visiting children; support patients through the process of transferring from ICU to the wards; assist with the transfer of patients to hospices/home to die; and provide support to ICU staff, such as with end-of-life care.

The team chair bi-annual 'Patient experience groups', where past-patients and families share their ICU experiences, and provide feedback.

Result: The role has developed, and has grown to support critically ill patients with learning disabilities or existing mental health diagnosis, and extending support to their families. The team participate in weekly rehabilitation meetings, and facilitate psychological support meetings for staff members.

Conclusion: The role continues to develop, intending to establish family support groups, in-patient exercise groups, and a new post for further rehabilitation support.

References:  
NICE (2009). Rehabilitation after critical illness: Clinical guideline CG83. National Institute of Clinical Excellence. Mikkelsen, M. E; Jackson, J.C; & Hopkins, R. A. (2016) Peer support as a novel strategy to mitigate Post-Intensive Care Syndrome. Advanced Critical Care 27 (2), pp 221-229.

### **P34: Critical Care Patient Acuity and Staffing Status Risk Assessment**

**Sheena Wright, Julie Barrett, Wrightington, Wigan & Leigh NHS Foundation Trust**

Purpose: Within our current climate, reduced staffing is a high risk factor throughout my organisation. Critical care staff were increasingly being expected to be redeployed to other clinical areas. We felt that non critical care staff lacked knowledge and understanding of the additional risk factors the critical care team face on a daily basis.

Background/Significance: The literature highlighted the minimum standards for safe staffing and recommends best practice to consider when redeploying staff from critical care. Although there isn't a wealth of literature available to support this, we deemed it vital to share and build upon guidance from the available literature to ensure safe staffing within our unit. We recognised the value in identifying environmental and situational risk factors within our unit to accurately reflect an acuity score which would then impact upon the staff needed to deliver safe care at all times. This does challenge the historic staff to patient ratio as acuity is a far more accurate measure of dependency.

Method: Initial draft of the risk assessment based on the

template from CC3N document commenced July 2018. Risk assessment completed on every shift and additionally if deemed necessary. This then adapted to meet our units risks.

3rd and final version completed December 2018. Risk assessment endorsed by Harm Free Care and Divisional Quality Executive Board.

Result: Our units greatest risks were identified further highlighting safe staffing relative to acuity. This then became our evidence to share if staff were expected to be redeployed when the unit acuity did not safely reflect this.

Conclusion: This risk assessment has resulted in sharing our additional risk factors with non critical care staff. This has allowed us to educate wider trust staff the importance and value of acuity scores and the impact of safe staffing within our own clinical area.

References:

Best Practice Principles to apply When Considering Moving Critical Care Nursing Staff to a Different Clinical Area, 2017, Critical Care Networks National Nurse Leads. Guidelines for the Provision of Intensive Care Services, 2015, the Faculty of Intensive Care Medicine /the Intensive Care Society.

## P35: The Role of The Band 4 Nursing Associate in Critical Care at UHS And Their Impact on The Workforce and The Patient

**Amy Wood, University Hospital Southampton**

Purpose: This presentation will take the listener through a journey of the ever evolving role of the Band 4- Nursing Associate, and how they support Registered nurses and the wider Multi- Professional team in the delivery of high quality person centred care.

Background/Significance: We will discuss the Educational Pathway embarked upon by this crucial work force, and their impact on staffing, capacity and patient care.

Method: The Band 4 Nursing associate role at UHS was originally developed to support individual personal development needs and provide educational opportunities, it was soon realized the incredible impact these individuals could have on the care needs of long term critically ill patients and their families.

Result: The role of the band 4 in UHS Critical Care sees them working within their competence alongside the registered nursing team under supervision; caring for patients with long term ventilation and rehabilitation

needs, facilitating care with the multi professional team and ensuring fundamental and essential care is delivered and acting as the patient advocate at all times.

Conclusion: These incredible individuals embrace the long term patient- working tirelessly to ensure that the complex needs of these patients are being met by proving them with the comfort and care required during a prolonged stay in Critical Care, not only supporting the patients but providing support to their loved ones.

References:

Nursing and Midwifery Council (28/09/2018) Available at; <https://www.nmc.org.uk/standards/nursing-associates/> (Accessed 26.03.19)

## P36: Reducing Medication Errors Within the Intensive Care Unit, Implementing A 'Bottom Up' Approach Towards Patient Safety

**Judith Tee, Meg Cormack, Alice Smith, Kings College Hospital**

Purpose: With a focus on the issue of patient safety, our work will showcase the positive impact the development of a 'safety awareness group' has had on the reduction in number of adverse incidents relating to medication administration. The group's work has been in conjunction with the units' established Critical Care Medication Safety Group (CCMSG), linking regularly to present audit data and identify common themes from drug related adverse incidents.

Visual displays of our work, alongside our monthly audit results demonstrate how we have reduced the number of medication related adverse incidents and highlight the positive effect our work has had upon the clinical practice as a whole.

Our work will show what methods have been utilised to achieve these results and how collaborative, multidisciplinary working has facilitated this. Furthermore, we aim to show how a "bottom up" approach to improving patient safety has empowered nurses and increased morale.

Background/Significance: Despite well established safety processes involved in the prescribing, checking and administration of medications, a recent report found that medication errors were accountable for approximately 712 patient deaths in the UK each year (Elliot et al. 2018). Further to this, the World Health Organisation (2017) has consistently highlighted medication errors as a global concern for patient safety. A group of band 5 nurses have implemented an innovative approach that strives to address this patient safety risk. The team

took a "bottom up" approach to develop strategies in the form of audits, clinically supporting best practice and educating staff through monthly drug awareness material to help reduce the number of medication errors occurring. In doing so, we aim to move towards a safety culture which facilitates learning from experience and empowers nurses to challenge poor practice, one which has been endorsed by the Care Quality Commission (CQC 2018).

Method: Through the use of observational and documentation based audits we have conducted monthly assessments into the medication administration process. Each month all four Intensive Care Units conduct two observational and two documentation based audits. The observational audit observes bedside practice, this includes observing whether the medication tray is clear before medication preparation, whether two nurses are present at the bedside and that all the 'R's of medication administration have been followed. The documentation-based audit identifies whether the drug has been signed and co-signed for within a set time period of fifteen minutes. Further to this, we plan to carry out questionnaires across the Intensive Care Units to audit the change in attitude towards medication administration which we look forward to reporting on.

Result: Whilst our data which will be presented at the conference in September will be up to date and much more representative of our work, in a three month period, from November 2018 to January 2019 we saw an improvement in the co-signing of medications within the fifteen minutes, with an increase from 55% to 59% to 67.5%. Our CCMSG meetings also reported a downward trend in the number of adverse incidents involving medications on three of our four units from August to November 2018. Our observational audits saw an overall large increase in compliance with correct preparation of medication and appropriate use of the R's on medication administration.

Conclusion: Our work has significantly improved patient safety by reducing the number of adverse incidents relating to medication administration. As members of the group we have observed and been involved in the initiation of conversations regarding current practice with individuals. This has generated openness in relation to the topic of patient safety and adverse medication errors. As such, we have created an environment where staff feel comfortable to discuss such matters. We have gained significant senior management support within our Trust and will be disseminating our work to a wider audience. We would be hopeful that Trusts alike may be encouraged to adopt a similar approach and attitude towards medication safety.

References:

Care Quality Commission. (2018) Opening the door

to change: NHS safety culture and the need for transformation. Care Quality Commission. Elliot, R.A., Camacho, E., Campell, F., Jankovic, D., St James, M.M., Kaltenthaler, E., Wong, R., Sculpher, M.J. and Faria, R. (2018) Prevalence and economic burden of medication errors in the NHS in England. Policy Research Unit in Economic Evaluation of Health and Care Interventions. Universities of Sheffield and York. World Health Organisation. (2017) Global Patient Safety Challenge on Medication Safety. Geneva: World Health Organisation.

## P37: Student Nurse Orientation to Critical Care...The Benefits

**Pam Sawden, Dumfries and Galloway Royal Infirmary**

Purpose: The aim of the project was to streamline the process of the Student Nurses transition into placement in Critical Care.

Background/Significance: Following a new build hospital and the restructure within Critical Care in Dumfries the service level agreement for student allocation increasing to six student nurses being on placement at any one time. Also, the introduction of the electronic documentation system (Philips ICCA) resulted in additional training for student nurses. Meaning preparation was paramount.

Method: With feedback from student nurses varying including how daunted and nervous they were by the Critical Care Unit versus other clinical area the topic needed improvement. Mentors were also reporting hurdles and issues around releasing time to care.

The orientation sessions were established and conducted by the Senior Charge Nurse and Charge Nurses with responsibility for being student nurse link personnel. Students were invited to attend a two-hour orientation session via email. Practice Education Facilitators were informed of the new format being tested.

The student nurses benefited from a relaxed orientation/ brief tutorial of the computerised documentation system and a question/answer session. They were able to meet many members of staff pre-placement.

Result: Feedback questionnaires were completed anonymously by the student and mentors. The University placement evaluation was reviewed.

All students asked to attend did so. Students placement feedback improved, they felt like they 'fitted in', reduced anxiety and increased motivation to learn.

Mentors feedback improvement and as a result the placement experience for the student improved. Mentors felt less stressed resulting in a more conducive learning environment.

Conclusion: The orientation session, lasting 2 hours prior to placement starting will continue in the Critical Care Unit in Dumfries. The short amount of time of invested by staff and associated cost has resulted in much bigger gains in student education and placement achievement.

References:  
Royal College of Nursing, (2017) Helping students get the best from their practice placement. 3rd Edition. London, Royal College of Nursing.

### **P38: SAFE Huddle Project**

**Ana Mendonca, Royal Berkshire Hospital NHS Foundation Trust**

Purpose: The aim of this poster is to exhibit the process and scientific research behind the conception of this tool and nevertheless the strategies for teaching and implement this tool in clinical practice. Therefore the data collection exposed that safety huddles culture was the most appropriate approach to provide opportunity for team to express themselves and participate in appropriate decision making activities.

Background/Significance: SAFE huddle was created follow a quality circle group, where the main goal was explore the concept of traditional hierarchical structure in Intensive Care Unit and the impact of this subject in the multidisciplinary team.

Method: Therefore the data collection exposed that safety huddles culture was the most appropriate approach to provide opportunity for team to express themselves and participate in appropriate decision making activities.

Result: Huddles create time and space for conversations, enhance relationships, and strengthen a culture of safety (Glymph et al., 2015). SAFE Huddles was created as a communication tool to improve patient safety by increase the awareness go high risk patients, enhance workflow and level out work load in our unit. According to Glymph et al., (2015) Huddle is a meeting between healthcare professionals to share information and increase awareness of situation that can risk patient safety

Conclusion: Nursing education in the clinical setting is a constant movement to improve patient safety and engaging team work (Clark et al., 2017). In order to improve sharing information between nurses and other

healthcare professionals, the establishment of safety huddle has been prove to improve not only patient care, but also promote team interactions, employee satisfaction and create transitional leadership.

References:  
Glymph, D., Olenick, Maria., Barbera, S., Brown, E., Prestianni, L., Miller, C., (2015) 'Healthcare Utilizing Deliberate Discussion Linking Events (Huddle): A systematic Review', American Association of Nurse Anesthetists Journal, 83 (3), pp183-188  
Clark, A., Glazer, G., Edwards, C., Pryse, Y., (2017) 'Transforming Nursing Education With Apple Technology', Nurse Educator, 42 (2), pp 91-94.

### **P39: Inhouse Team Simulation to Improve Team Performance**

**Michaela O'Sullivan, Julie Clarke, Torbay and South Devon NHS Foundation Trust**

Purpose: The aim of the simulation is to improve clinical management and discuss the human factors influencing the team working.

Background/Significance: Nurses in our Intensive care unit are allocated into five teams. We have established annual study days within these teams consisting of a morning of In House Simulation followed by an afternoon of education/well-being. We chose to have team based study days as participants are familiar working with each other, would find these days less stressful and be able to support each other afterwards (Low, Horrigan and Brewster 2018).

Method: The simulation session is run by an ICU consultant, practice educator and ICU Sister/charge nurse. We begin with a brief introduction of the mannequin and equipment. The scenario is managed in a bed space in the Intensive Care Unit, lasting approximately 30 minutes. This is then followed by a debrief, analysing the clinical scenario, emotions and discussing the human factors and behaviours that influenced the team performance

Result: We have now run 9 days. Feedback forms are filled in at the end of each day. Feedback has been overwhelmingly positive and anecdotally nurses are reporting more confidence in managing stressful situations. The Nurses are using the knowledge gained to help complete their ITU competencies. We have also changed practice on the unit as a result of this feedback.

Conclusion: The team simulations have been successful and a positive experience for the delegates, so we

will continue to offer and improve them as a learning opportunity.

References:  
Donaldson, L (2008). Safer Medical Practice: Machines, Manikins and Polo Mints. Chief Medical Officer's Report 2008, 49-55.  
Low, X.M. Horrigan, D. and Brewster, D.J. (2018) 'The effects of team-training in intensive care medicine: A narrative review' Journal of Critical Care December (48) pp 283-289

### **P40: Evaluation of A Practice Development Service**

**Lisa Enoch, Hannah Donald, Cambridge University Hospitals**

Purpose: Service evaluation of a practice development team.

Background/Significance: Addenbrookes Hospital has two specialist adult intensive care units (ICUs) with 43 beds. The workforce has changed dramatically fitting in with a national picture; very junior with a challenging skill mix (HEE 2014). This has had an impact on the PD (practice development) team, support and educational needs for new and existing staff (Baid & Hargreaves 2015). This evaluation wanted to explore three areas; if staff understood the PD role, if they felt supported and had access to the PD team, and if the education and delivery was effective

Method: R&D approval was obtained, and an online anonymous survey was devised. It was emailed to 445 staff including allied healthcare professionals and consultants.

Result: There were 90 responses (20%). Thematic analysis found that staff generally had a good understanding of the PD role and areas of impact such as patient safety, recruitment / retention and educational needs. Seven (8%) felt PD were consistently being pulled into the clinical numbers making them unavailable for support. Several answers suggested established staff did not access PD and would like too. The majority found bedside teaching more useful than the classroom environment with several staff finding simulation stressful. Just under half (n=40) said they would like more video/e-learning whilst others found it a "tick-box exercise".

Conclusion: As we embed newly qualified and overseas nurses into a highly technical arena we need to appreciate the complexities of support and education

required whilst supporting our established staff. In response we will continue to have an individualised approach to supernumerary time. We aim to enhance simulation training and provide effective debriefing whilst looking at other technology based teaching. We will offer career mapping and clinics for established staff whilst providing competency clinics for new starters. Within the team we will establish peer review/supervision for our learning.

References:  
Baid H, Hargreaves J. (2015). Quality and Safety: reflection on the implications for critical care nursing education. British Association of Critical Care Nurses; 20: 174-182.  
Health Education England (2014) Raising the Bar. Shape of Caring: A Review of the Future Education and Training of Registered Nurses and Care Assistants. [Online] Available from: <http://hee.nhs.uk/wp-content/blogs.dir/321/files/2015/03/2348-Shape-of-caring-review-FINAL.pdf>

### **P41: How Multi Professional Workshops Enhance the Delivery of High-Quality Care and Teamworking**

**Laura Colston, Southampton General Hospital**

Purpose: To reduce the theory to practice gap using multi professional evidence based workshops to achieve higher standards of safe quality respiratory care within a Neurosciences Intensive Care setting.

Background/Significance: Whilst undertaking a QI project we identified a theory to practice gap (Huston et al 2017 Hussein and Osuji 2017) that contributed to increased stress amongst staff, a lack of confidence and risk to safe quality respiratory care. Evidence from SWOT analyses, audits and literature indicated a need to devise innovative ways to deliver multi-professional education.

Method: A multi-professional Practice Development team devised a respiratory focused workshop to be delivered to the entire multi-disciplinary workforce within NICU. The content focussed upon respiratory theory, patient management, associated equipment and practical skills simulation based upon current best evidence. The design enabled a six hour workshop to be delivered twice over a 12 hour shift, each staff member working a 6 hour clinical shift and attending a 6 hour workshop.

Result: 12 workshops were delivered in 6 days, all 80 multi-professional staff attended and showed an improvement in practical respiratory skills (e.g 100%

staff used correct manual hyperinflation technique), knowledge and competence specific to patient care, achievement of best practice standards (e.g 100% documentation of endotracheal cuff pressure), equipment use and staff confidence in comprehensive respiratory management.

Conclusion: This innovative workshop design encouraged effective multi disciplinary team working to deliver multi - professional education efficiently within the current NHS climate. This has reduced the theory to practice gap resulting in a confident highly skilled multi-disciplinary team that delivers a higher standard of safe quality respiratory care within a Neurosciences Intensive Care setting. This workshop design can be easily updated as practice evolves and replicated for other body systems or critical care environments.

References:

Huston, C., Phillips, B., Jeffries, P., Toder, C., Rich, J., Knecht, P., Sommer, S., Lewis, M. (2017) The academic practice gap: Strategies for an enduring problem. Nursing Forum 53 (1)  
Hussein, M and Osuji, J. (2017) Bridging the theory to practice dichotomy in nursing: The role of nurse educators. Journal of Nursing Education and Practice 7 (3) pp 20-25



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