Chelsea and Westminster Hospital NHS
NHS Foundation Trust

Intensive Care Unit Annual report 2013 -2014

RESPECTFUL
KIND
SAFE
EXCELLENT

CONTENTS

EXCELLENT

INTRODUCTION

How do we know we are effective, safe, kind and excellent?

This is one of the questions posed to me by our customer excellence standard assessor. In answering the question we need to be able to state how we do this continuously on the unit. This therefore, is why we produce an annual report each year which is divided into the sections covering safety, kindness, excellence and respectfulness.

We demonstrate Respectfulness in this issue by the work on our patient diaries, end of life care and organ donation. We demonstrate kindness by all the work and feedback we receive from our relative satisfaction survey and focus groups. We demonstrate safety by our work on infection control, pressure ulcers, learning from our morbidity and mortality meetings, clinical incidents etc. We demonstrate excellence by our project work, development programmes and multidisciplinary working.

We also produce an annual report as it gives us a chance to reflect on the activities in the unit in the last year. It is written and produced by staff on the unit so staff can gain skills in report writing and project management. It also recognises staff achievements and involvement no matter what grade they are or job they do. It collates all the achievements and outlines our plans and developments for the coming year in an organised and structured way. In addition it can be used as a marketing tool to be distributed at conferences and in recruitment packs.

In 2013/4 we were sad to say goodbye to Dr Neil Soni, an internationally acclaimed consultant who retired after years of hard work and commitment to the intensive care service. Last we heard he is enjoying fishing at the moment. Another person who left us was Claudia Thompson, a humble, loyal, kind volunteer who worked on the unit for many years but sadly died of cancer. We recognise that work life is made up of teams in which we all uniquely contribute. We should celebrate our contribution and celebrate our colleagues.

We will celebrate this annual report and all the work in it, which highlights what we are doing on a daily basis in critical care.

WELL DONE EVERYONE !

Jane Marie Hamill
Head Nurse Critical Care

FOREWARD

Year in Review for Intensive Care

This past year has brought us sadness and joy. Sadness as we had to say goodbye to one of the best intensivist in town, a great colleague, mentor and friend. We wish Dr Neil Soni, the father of our Intensive Care all the best and we thank him eternally for building the foundations of our unit. Joy as two high calibre doctors, Dr Alex Li and Dr Pratik Senah have joined us. Alex is now our education lead and runs a teaching program for Anaesthetic and Intensive Care trainees. Pratik, is one of our old clinical research fellows who completed his high degree training with Dr Soni. Pratik is now a member of the Consultant team he will continue developing bridges with other acute areas in our trust while establishing his own area of research.

Chelsea & Westminster Hospital has been assessed by the Care Quality Commission (CQC) and our unit has received good feedback. We have seen more than 10,000 critically ill patients since the earliest fifties and received multiple awards for recognition of our high standards of care, including the Customer Service Excellence Standard award. We are not used to being just 'good' so we have taken the CQC comments very seriously as we feel we could prove them wrong. We will enhance our documentation style and move into an electronic integrated system to improve our efficiency and free our personnel, to expend more time on direct contact with our patients. We feel there are still so many areas we could improve.

We have conducted an epidemiological analysis of our population to gain a better insight of our patient's needs overtime. Jane Marie Hamil and Elaine Manderson, the souls of our unit have already put some suggestions into practice. We have developed pathways to recovery to help patients to regain their autonomy and enhance their hospital experience. Jane Marie has led for more than a decade the patient's diary project and patient focus group. These projects have the sole aim of helping patient's to fill their memory gaps in retrospective to prevent posttraumatic stress disorders, reduce the level of anxiety post intensive care and ultimately improve patient's quality of life.

Patients and relative's wellbeing is at the top of our agenda and we were proud to welcome Dr Trudi Edington, neuropsychologist from the University of Westminster and collaborator of mine who started

working as *pro bono* in a mindfulness project. This non-judgmental gentle approach has been shown to reduce stress and improve well-being with measurable changes in psychological and physical health. The mindfulness project was initially developed for patient's relatives but later it was expanded to patients and intensive care staff due to demand. We are great believers that healthy minds and bodies in harmony could potentially speed the process of recovery from critically ill conditions.

We have also joined the Intensive Care National Audit & Research Centre (ICNARC) which will allow us to benchmark our intensive care unit against other intensive care units across the country. Nevertheless, the most exciting event was the introduction of VIC, our Virtual Intensive Care Professional (askvic@chelwest.nhs.uk). Social media brought us closer than ever to our patients. Patient's comments are listened at any time of the day or night and VIC is prompt with answers to patient's questions and attempts to provide solutions immediately.

The New Year is coming with infrastructure changes, integrating systems and unification of activities related to the care of the acutely ill patients. So…watch for this section in 2015.

Dr Marcela Vizcaychipi
Consultant Anaesthetist and Intensivist


How do we demonstrate
EXCELLENCE
on the intensive care unit?
We provide education and training for all our staff to improve our performance and deliver the best care for critically ill patients and their relatives.
We have daily MDT (multidisciplinary team) ward rounds to ensure a holistic plan of care is developed and implemented.
'We will do what we say we will do, e.g., if we say we will get the doctors to speak to relatives we will organise it.'
How do we demonstrate
SAFETY
on the intensive care unit?
We will maintain safety by regularly checking and auditing our clinical practice.
We will provide continuity of care so that you will get to know the staff that look after you.
'We will challenge each other about infection control prevention'


How do we demonstrate
RESPECTFULNESS
on the intensive care unit?
We will keep the curtains closed when carrying out care.
We will find out what your likes and dislikes are through our patient profiles.
'We will treat all patients and relatives as individuals'
How do we demonstrate
KINDNESS
on the intensive care unit?
We will ask you how you are and if you need any help, support, advice we will help you.
We recognise that it is important that your loved ones are near so we will provide overnight stay rooms and have limited visiting restrictions.
'We will treat you how we would like our relatives to be treated'

Our Values

PATIENT DIARIES -
FEEDBACK FROM PATIENTS AND BEREAVED RELATIVES

We started really focusing on obtaining feedback from patients and bereaved relatives in 2013. This is important to see where the diaries work successfully and achieve their aims, and to see how we can improve them for patients and bereaved relatives. It is also important to demonstrate the diaries' relevance to nurses, in order to maintain their enthusiasm.

However, we encountered various issues with getting feedback. Firstly, the actual process of obtaining feedback can be challenging. We were concerned about contacting ex-patients without warning them,, and then feeling obligated to help us. Therefore, we now ask the patients/relatives if we can contact them for feedback when we return their diary. They sign this on the Acceptance Form. We aim to arrange a date to phone them during this meeting. Secondly, we want to ensure that the feedback we get is in depth, honest and constructive. It is useful to hear about specific diary entries, as well as trends. We are aware that patients/relatives may feel like they need to be 'polite' because this is my project, so we emphasise that I really want to hear about what we can improve, so that we can make other patients' experiences better. We encourage them to come up with suggestions. However, we still feel this is an issue that needs to be more fully addressed.

The feedback about the diaries was mostly very positive, with patients and bereaved relatives saying how much they appreciate the diaries however; there are definite areas for improvement.

Areas for Improvement for the diaries

Comments from Relatives	Number of People
The diaries didn't give enough medical information, and were too vague.	6
The handwriting was poor/illegible.	2
There were missing days – this worries patients as they think they must have been really sick and no-one wanted to tell them.	2
The diaries were started too late – which leaves them with lots of questions.	2

Patients' and relatives' positive comments about the diaries include:

Can't believe that people cared so much; valuable in demonstrating nurses' compassion and shows how they 'go beyond the call of duty'	6
Answered questions/lost days/filled in gaps. Useful having a sequence of events.	6
Emotional, moving, touching	3
Liked that it was written as a letter/like nurse talking to patient	3
Felt 'humanised'/ good feeling that nurses were trying to get to know him as a person.	2
Comforting	2
Showed me how poorly I was, more powerful than just being told because this is written down	2
Showed nurses' humanity	2
Tool to discuss with family	2
Can see how far I have progressed, when I get down	2
Realistic recovery goals	1

We have starting to address these issues by forming a Patient Diaries Interteam Project Group, with Band 5, 6 and 7 nurses who have a special interest in Patient Diaries.

Rose Le Coudeur
Sister – Team D

SUPPORT FOR PATIENTS FOLLOWING CRITICAL ILLNESS

The intensive care unit has been running focus group for 10 years. Listening to patients' experiences of critical care enables us to make changes to our service and develop specific information for patients and their families, particularly when they are discharged from the unit. Feedback from the focus group has resulted in two projects.

ON THE ROAD TO RECOVERY FOLLOWING CRITICAL ILLNESS

The first is an information booklet called 'on the road to recovery' which is information for patients following critical illness. This booklet was developed by a range of healthcare professionals, ex patients and relatives. The booklet is divided into three sections

Section 1: Moving to the ward -what happens on the ward and how it might differ from ICU

Section 2: Physical and psychological changes after critical illness -outlines what they might be and why they occur

Section 3: rehabilitation- looks at how you might get back on the road to recovery.

This booklet is given to all patients on discharge from ICU

VIC - VIRTUAL INTENSIVE CARE PROFESSIONAL

VIC is our virtual Intensive Care professional- the name suggested by staff on the unit. VIC is an email address which will be given to all patients and relatives on discharge so that when they go to the ward or home they have an email address where they can ask any questions or highlight any concerns or suggestions.

Emails will be answered within 48-72 hours and a log will be kept so that it will inform any future developments. Both these projects have been developed to ensure patients and their relatives feel reassured and safe following their critical illness.

Jane Marie Hamill
Head Nurse Critical Care

ORGAN DONATION

We would like to take this opportunity to introduce ourselves as the "new" team of Specialist Nurses in Organ Donation (SNOD) for Chelsea & Westminster Hospital. We also work with Imperial College NHS Trust and comprise of 4 SNODs: Kelly Martin, Stella Shailer, James Hardie and Fiona Pinches. We seek to help Chelsea and Westminster Hospital acute care teams when supporting patients and their relatives in considering organ donation as part of all End of Life Care discussions and decisions. It is sadly, no surprise that we continue to see an increasing demand for organ transplantation in the U.K. While the NHS Blood and Transplant (NHSBT) have been very successful with an overall 50% increase in deceased donors celebrated last year, we nevertheless continue to see rising demand.

The latest strategy "*Taking Organ Transplantation to 2020*" from NHSBT (http://odt.nhs.uk/to2020) will focus on:

a. increasing consent for donation in the UK from 57% to 80%
b. increasing to 26 deceased donors per million populations (pmp), from its current 19.1 pmp.
c. improving the number of organ utilisations and aim to transplant 5% more of the organs offered from consented, actual donors.

Ultimately we would expect to see a rise of deceased donor transplants from 49 pmp to 74 pmp. A huge task. As always all of our efforts are centred on increasing donations to support transplantations.

We provide a 24 hours on call service for any advice you may require and discussions of any related end of life care challenges or referrals. Also, we can offer any support, education or training concerning organ and tissue donation. If you need us we can be contacted via the London Pager service on 07659 100103.

Stella Shailer, Kelly Martin, James Hardie & Fiona Pinches

Specialist Nurses for Organ Donation

End of Life Care

After a period of concern, it was with great sadness that the Liverpool Care pathway (LCP) was withdrawn for use late last year following the independent review chaired by Baroness Julia Neuberger. This review made several recommendations about end of life care, the main one being the LCP should be phased out and replaced by a new system and approach to improving the quality of care for the dying.

In June 2014 the Leadership Alliance for the Care of the Dying People produced a document entitled 'One chance to Get it Right' which proposed five priorities of care which set out the standards of care that dying people and their families should expect to receive when a person is at the end of their life. This requires regulatory bodies such as the NMC and GMC to produce guidelines to mirror and expand on these five priorities of care.

At present on the Intensive Care Unit (ICU) we are using the Palliative Care Guidance document which allows the healthcare professional to consider the social, spiritual, psychological and physical needs and the nursing care our patients may need addressing when deemed at end of life. There is also a section on the care after death. We continue to audit our deaths and the quality of care our patients and families receive and this is fed back to the Mortality and Morbidity Meetings and the End of Life Steering group, both of which have quarterly meetings. This allows for a review of our current practice and suggestions and improvements to be made.

Ann Sorrie
Sister – Team H

SAGE & THYME

We have two staff members on the ICU involved in delivering training designed to help staff throughout the hospital in improving communication with distressed people. This training is known as SAGE & THYME®.

The session was developed by clinical staff at the University Hospital of South Manchester NHS Foundation Trust (UHSM) and a patient in 2006. It was designed to train all grades of staff how to listen and respond to patients/clients or carers who are distressed or concerned. It places published research evidence about effective communication skills within a memorable structure for clinical practice.

'SAGE & THYME' is a mnemonic which guides healthcare professional/care workers into and out of a conversation with someone who is distressed or concerned. It provides structure to psychological support by encouraging the health worker to hold back with advice and prompting the concerned person to consider their own solutions.

The training is designed as foundation level communication skills training, suitable for any member of staff (e.g. medical secretary, outpatient clerk, nurse, physiotherapist, doctor, social worker, student) and for any specialty. It can be used with patients and carers, students, colleagues and children – anyone who is distressed or concerned – inside and outside of health and social care.

The sessions are taught as a 3 hour workshop for up to 30 participants using three facilitators. The workshop uses a mix of small group work, lectures and rehearsals.

Staff from ICU have been accessing the course and have found it to be very helpful in helping deal with people visiting the ICU who are often upset and distressed and has left staff members feeling more confident in empowering people to deal effectively with their distress.

Elaine Manderson
Clinical Nurse Specialist

Ann Sorrie
Sister- Team H

My Role as a Volunteer on ICU

My involvement with ITU goes back to 2002 when my daughter was admitted onto the ward with meningitis. Thanks to the amazing care she received she made a miraculous recovery for which I will be forever grateful. So as a way of saying thank you I felt the least I could do was to offer to act as a volunteer on the Unit.

At first my role was very much a matter of helping with filing, photocopying, looking after the plants and making cups of tea but soon after I started I was invited to join the Quality Group and I feel my most important role is as a relatives' representative. This in turn has led me to becoming responsible for the Relatives Satisfaction Survey. The aim of the Survey is firstly to audit nursing practices and secondly to try and find out from relatives what improvements and changes they'd like to see. The survey plays an important part in helping ITU maintain the high quality care that it aims to provide. It is also used as a way of ensuring that the Unit is keeping up the standards required to enable it to be awarded the Customer Service Excellence Award.

As a result of my involvement with the Unit I have more recently been invited to help start up the Chelsea and Westminster's Organ Donation Committee. For the past 4 years I have been Chair of the Committee acting as a bridge between the hospital and the NHSBT (NHS Blood and Transplant). In this role I represent the hospital at both regional and national meetings. Whilst the Chelsea and Westminster isn't a major centre for organ donation the Committee is charged with increasing the awareness or organ donation as an accepted part of end of life care and ensuring that every family who loses a loved one will be given the opportunity to transform the lives of others.

Over the years my involvement with ITU has been hugely rewarding and it has been a privilege being a part of such a great team. I consider myself extremely fortunate in that thanks to ITU not only do I have a wonderful daughter but since her recovery I have a hugely satisfying role as a volunteer.

Caroline Heslop
Volunteer

Feedback from our Patients and Relatives on the Intensive Care unit Services

In 2013-2014 we developed an engagement policy which reviews the various ways Chelsea and Westminster Intensive Care unit seeks to engage users of the service in order to receive frequent, relevant and informative feedback. This report covers the feedback received during this year.

Relative Satisfaction survey

The Units volunteer reviews the discharges from the unit and posts a questionnaire with a stamped addressed envelope

In 2013 - 32 surveys were returned. An analysis every 6 months is completed by our volunteer and presented at the quality group

Positive Comments

We scored highly on how we treat relatives, how we answer questions and how welcome our visitors feel on coming to the unit. The cleanliness of the unit was scored very highly.

Areas for development	What we did
Lack of hot drinking facilities	We have had a machine in the past but it was not used effectively so we have placed a water fountain in the coffee room instead
Lack of awareness on primary nursing	Promoting it via you said we did boards and having posters up
Relatives would like to see the consultant more	Arranging times and ensuring relatives can ask us if they want to speak with a doctor

Patient Focus Groups

We had two focus groups in 2013 where we had 8 patients and 6 relatives. Key themes and actions are outlined in the table below

ISSUE	ACTION	STAFF
Relatives can feel overwhelmed	Understanding those feelings Reinforcing the importance of primary nursing Giving some hope	Highlight at unit and quality meetings
Seeing relatives confused is difficult	We are producing leaflet on ventilation and weaning Promoting leaflet on delirium	To place completed leaflets in waiting area and information folders Getting staff to recognise patients who are suffering from delirium
Focus groups	More focus groups – increase to 4 times per year Set dates so that patients and relatives know in advance Focus changed to support mechanism	Dates – March, June ,Sept, Dec Staff can access and develop skills – open to Allied Health Professionals
Explained different dreams- frustrated that no one seemed to believe you at the time	To give information on why it is difficult to separate reality from fiction Provide reassurance and support	Acknowledge dreams but help the patient to re-orientate
Helplessness as a visitor	Hair washing Feet washing and moisturising hands Bringing In photos Keeping a diary Information	Encourage family members to participate in care Get them to fill in patient profiles

Thank You Cards

On the intensive care unit we collect and collate thank you cards and letters from visitors and patients. Thank cards can give a valuable insight into the care that is being delivered and can be used to demonstrate what gives relatives and friends comfort when their loved one is critically ill. They can make staff feel appreciated and be used to support them when difficult decisions are made.

On the Intensive care unit we have visible values. The sentiments expressed in the thank you cards show we are practising what we believe…

For **KINDNESS** we will ask you how you are and if you need any help, support , advice. We also recognise that it is important that your loved ones are near so we will provide overnight stay rooms and have limited restrictions.

For **RESPECTFULNESS** we will keep curtains closed when carrying out care . We will treat all patients and relatives as individuals

For **SAFETY** we will provide continuity of care and challenge each other about infection control practices

For **EXCELLENCE** we provide training and education for all our staff and have daily ward rounds to discuss plans.

Please see the table overleaf for some examples of cards we have receiving from relatives and significant others.

Kindness	Safety
Visiting frequently, Allowed her mother to stay in accommodation 'kind to provide translators' 'she was treated with considerable kindness by the staff and was the recipient of first class medical care' EF, OCT 2013 ' But for me personally as an unrestricted visitor the help I received from your staff was first class and very comforting and for this alone I owe your people a deep and meaningful sense of gratitude' DG, Jan2014	'those two little words seem so inadequate for all the kind care compassion and help and support you have given us as a family and to me as a patient.' JG, April 2014 '……astonishing tenderness combined with technical efficiency…….all the kindness shown to my aunt ,my daughters and myself during that difficult time SM, Jan 2013
Respectfulness	**Excellence**
'I would like to say a massive and heartfelt thank you to you all for the wonderful and compassionate care my aunt R St. C received during her stay in the unit. Your care and dignified approach went beyond the call of duty and I can't thank you enough for all you did to make my aunts final hours so peaceful' MG. 9 April 2014 'All that you did for her and the way you preserved her dignity which was important to her' MG. August 2013	' Fantastic care from the beginning to his unfortunate passing' DB December 2013 'Thank you for all your support and dedicated input into nursing my dad. Without you guys he and many more would not be here today' 'usually gratitude is expressed when the patient leaves a unit alive and well, but the family-grievous at their loss-could not have been more complementary about the care and kindness given by all of your doctors and all of your nurses TP, Dec 2013

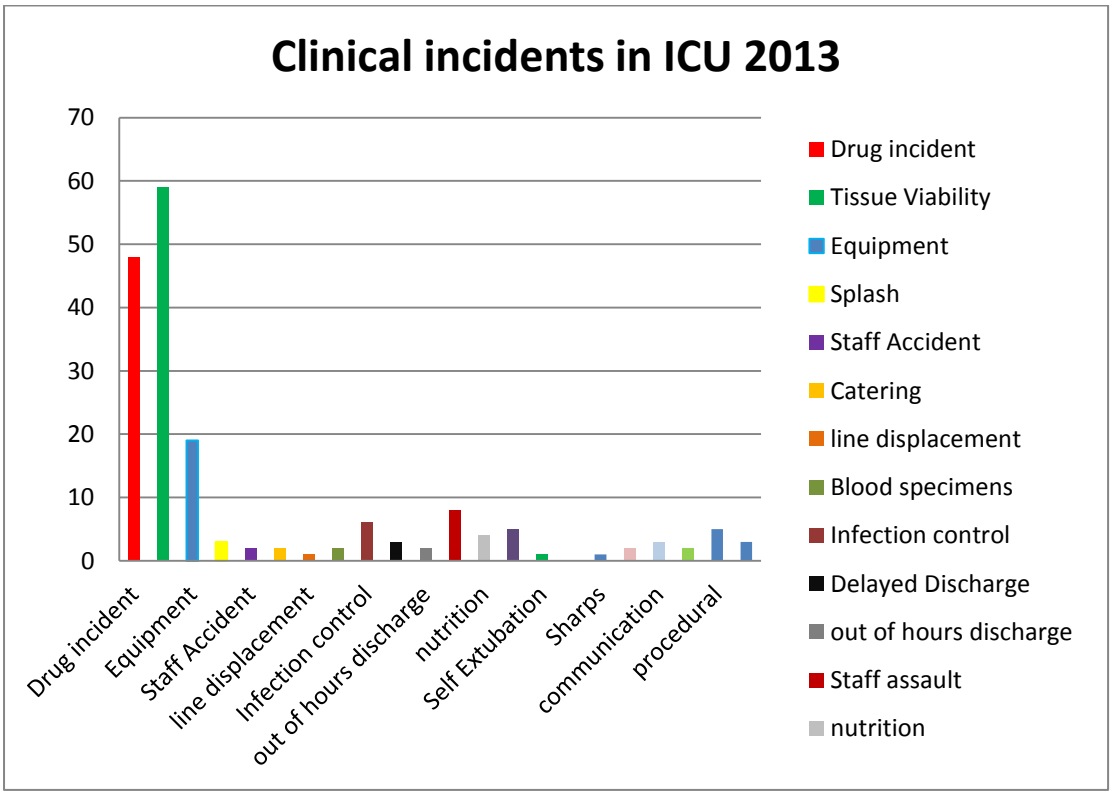
In addition the themes of 'information, attention to detail, respect, care, compassion and kindness' expressed in thank you cards make us realise what is important and what makes the difference to our patients and their loved ones during their stay in hospital.

Jane Marie Hamill
Head Nurse Critical Care

Clinical Incidents in the Intensive care unit

In 2013, 197 clinical incidents were recorded by staff on the intensive care unit (ICU). Table 1 divides these incidents into specific categories.

Table 1 Clinical Incident on the Intensive Care Unit



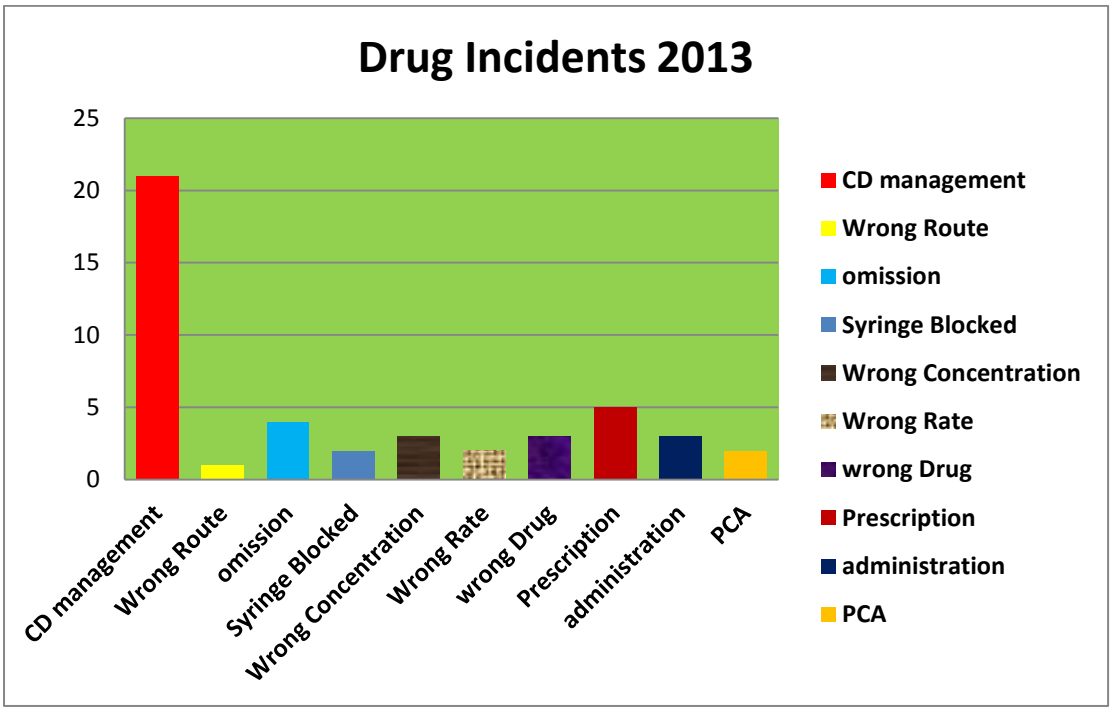
Process

When a clinical Incident occurs on the intensive care unit, a form is filled out and the relevant staff are contacted depending on the incident. All forms are reviewed by the Head nurse for Critical Care who fills in the management section but also logs them on the ICU data base. All drug incidents are followed up with staff and the pharmacist is informed. Key triggers which lead to the incident occurring and key areas for development to prevent it happening again are identified. This is then documented in a letter to the staff member. Each quarter a summary of incidents is presented to staff on the unit again reinforcing good practice or acting on ideas or suggestions to prevent incidents from reoccurring. Any major themes are presented via the M and M and clinical governance day. An annual review also takes place which is presented in the annual report.

Learning in 2013

Clinical incidents are a great way to review practice and think about where there are gaps in information, knowledge or process. It is also important that staff who fill out incidents forms know that they are being taken seriously and they can receive feedback on any they have filled in.

Table 2 Drug Incidents between January – December 2013



There were 48 reported drug incidents in 2013. Table 2 outlines the reasons for these. Any member of staff involved in a drug incident is met individually and asked their opinion on how the incident happened and how it can be prevented from occurring again. We incorporate these drug incidents into our drugs quiz so that all staff can learn from incidents which have occurred.

Controlled drug (CD) management was highlighted as a theme and this included broken ampoules, miscounting of suspension and loss of ampoule which led to increased scrutiny of our CD management and practice. This included a relook at the environment and clearing spaces to check CDs.

Tissue Viability

Last year we had 59 incidents related to tissue viability. On the unit we have set up a tissue viability group to review our pressure ulcer incidence, review products to prevent skin breakdown. We have also increased our teaching and training in relation to pressure ulcer management. We introduced the SKIN bundle and have made all staff sign a declaration stating that they are accountable for their practice. In addition we updated staff on

TED (thrombo – embolytic device) stocking management and got these prescribed on our drug chart.

Equipment

In 2013 we had a couple of incidents regarding transfer of patients to CT scan where equipment failed. We are still actively trying to get a transfer trolley which will improve the practice of transferring our patients safely when they leave the unit.

Presenting themes from clinical incidents allows staff not only to know what happens to the incidents forms they fill out but gives them the opportunity to identify the solutions to the problems.

Clinical incident monitoring ensures safe practice is a transparent process were we can all learn and change practice as a result of what happened and not just where the incident occurred. It allows us to learn and develop practice as an individual, team and unit.

Jane Marie Hamill
Head Nurse Critical Care

Pharmacy

It is a sincere pleasure to be part of the C&W ICU multidisciplinary team whose members respect, appreciate and acknowledge each other's roles and contributions to patient care. What makes our unit successful is the incredible level of support we have for one another, our approachability and readiness to learn from others and share our own knowledge.

The pharmacist is an active member of the ICU and TPN ward rounds. We are involved in facilitating patient discharge, rehabilitation and practice research. As part of the clinical support team I also provide a clinical service to level 1 AAU, main, paediatric and Treatment Centre theatres, Resuscitation, Xray, MRI, Nuclear Medicine and Resuscitation.

Risk management of medication errors has been facilitated by the quarterly ICU incident reviews lead by Jane Marie Hamil and the changes in practice we have made collaboratively to minimise risk. The ICU is one of the most proactive areas within the Trust for reporting incidents and for learning from them.

TPN activity has more than doubled in the past year. The top three indications for TPN are malabsorption, gut rest and ileus. £25K was spent on TPN in ICU alone last financial year. A contract negotiation with a different provider earlier this year saved the Trust a substantial amount of money.

A sedative drug was introduced onto the Trust formulary as an alternative to midazolam or propofol, for difficult to wean patients requiring a lighter depth of sedation. An 18 month audit of usage showed that only half the patients treated responded. This, together with the financial impact led to an active review of the way the ICU utilise the medication.

It has been an interesting year, full of clinical and financial challenges. I look forward to seeing what 2015 has to offer.

Chris Chung
Lead Pharmacist Imaging & Anaesthetics

Dietician

The role of the ICU dietitian is to work in collaboration with the multi-disciplinary team (MDT) to promote optimal nutrition of the critically ill patient. In addition, they identify those at risk of malnutrition and plan patient specific nutritional interventions on this basis to maximise outcome and to follow up patients on a regular basis.

Important aspects of this role include:

a. To improve feed delivery (both parenteral and enteral)
b. To help minimise nutritional losses
c. To evaluate nutrition related research and implement evidence based practice
d. To provide education and training on ICU nutrition
e. To undertake research and audit
f. To assist nutrition guideline and protocol development
g. To ensure adequate preoperative nutritional optimisation

We continue to work hard as a unit to ensure excellence and safety for all areas of nutrition. The development of bedside post pyloric tube placement means patients receive nutrition as soon as possible. This is a new and innovative service that few ICUs are practicing and we presented our work at the European Nutrition conference in September last year. We hope to develop this service further and train additional staff to further improve the service.

Emer Delaney
Dietician

ACTIVITY AND PERFORMANCE

Activity & Performance

Critically ill patients require organ support and close, constant attention by a team of specially-trained health professionals. Critical care is a specialty which provides support for patients with acute life-threatening injuries and illnesses.

Table 1 outlines activity in terms of admittance, occupancy and discharges for burns, bariatric (elective obesity surgery), high dependency and intensive care patients

Activity	Admittance		Occupancy				Discharges			
	Admissions	Refused admissions	LOS	Occupancy	Target	Variance	Total Discharges	% Discharges< 24 hours	Target	Variance
BURNS	28	0	8	65%	75%	-10%	26	100%	100%	0%
BARIATRIC	9	0	3	N/A	75%	N/A	8	100%	100%	0%
ICU- Level 2	300	3	4	124%	75%	49%	299	91%	100%	-9%
ICU - Level 3	125	0	5	63%	75%	-12%	122			

Burns ICU

There was an increase in admissions in our burns ICU for the year 2013 – 2014. There were 28 admissions during the reporting year, 65% increase in comparison to the year before (17 admissions). This is due to the length of stay decreasing to a median of 8 (16 for 12-13) which resulted in an increase in available bed days. One area that we will need to focus on next year is improved capture and analysis of refused admissions, which will require better communication between the ICU and the general burns team.

Bariatric

There was decrease in bariatric activity this year the lowest that we have seen at 9. Most bariatric admissions to the high dependency unit are due to co-morbidities such as obstructive sleep apnoea or other underlying medical conditions.

HDU level 2

There was increase in the amount of level 2 admission again this year, 18 more than last year. The demand for high dependency beds has increased year on year. Here at C&W we often operate at over 100% occupancy in terms of level 2 activity. Patients sometimes get cared for in the recovery department or we open our extra bed, though this does mean that we are increasing staff numbers per shift to safely manage those extra patients. The patients that are being admitted are becoming increasingly complex due to existing co-morbidities but are not requiring invasive support. APACHE score* as a mean has also been increasing, 17 for this year compared to 14 for 12-13, which would reflect the demand for beds in this cohort of patients. 56% of HDU patients were admitted post operatively.

ICU level 3

Critical care units should run at an average occupancy of around 65-70%. This is so that emergency admissions and elective demand can be accommodated. Capacity however is not just about beds but about a multi-disciplinary workforce providing a flexible approach to a patient's critical care, ensuring effective and timely care. Our level 3 occupancy rate for the year was 63%.

Jason Tatlock
Information Officer/Audit Administrator

Finance and Supplies

The Supplies and Finance Group meets every two months to discuss ways in which the unit can increase cost effectiveness and awareness and decrease wastage through action planning.

Members of the group are available to all members of the multidisciplinary team who wish to raise suggestions and comments about areas of spending that could be used to benefit the unit and its users. This includes the trialling and evaluating of new products, to education on reducing wastage through our annual quiz, which highlights the cost of both disposable and non-disposable items.

Accomplishments of the group this year include:

a. HDU admission bags. These contain the basic stock that would be required to set up a bed space for a high dependency patient admission. It is envisaged that these bags will assist in decreasing the amount wastage by preventing the 'overstocking' of the bed area.
b. The trialling of new products such as arterial blood gas syringes, patient comfort wipes and ventilator filters which save money without compromising patient care.
c. Working closely with our inventory supplies team to identify items that we need a constant supply of and have these items ordered each time. This has also helped in pour stock levels and decreased clutter.

The work of this group is ongoing and we will continue to work closely with staff working in the ICU and throughout the hospital to promote cost awareness and effectiveness.

Jason Tatlock
Information Officer/Audit Administrator

Morbidity and Mortality Meetings

The intensive care unit has been running quarterly morbidity and mortality meetings for nearly 10 years. These are multidisciplinary last for hour and a half, and are chaired by the consultant on a rotational basis.

The format consists of reviewing the deaths of the patients who have died in the intensive care unit in that quarter. Each patient on admission to the unit is given an apache score (severity score) Any patient that scores less than 20 but dies , the consultant will review and identifies patient cases which will be presented at the meeting . There are usually two case studies presented. A discussion occurs and any learning is identified. For example, the apache scoring system may not be sensitive to certain parameters so the score is less than what it should have been.

The second part of the meeting encourages discussion on future treatments, practices and ensures different staffing groups are updated with what is happening on the unit and are able to give their opinions and suggestions in a constructive way. For example in past meetings we have reviewed audits on our drug management, presented business cases for equipment, reviewed our air management and cooling of a patient post cardiac arrest.

The meetings are minuted and are sent to all staff. It is a very useful, informative way of discussing issues, concerns and suggestions in a practical and engaged way. It is extremely well attended-over 15 staff attending but this may be due not only to the content of the meeting but the lovely lunch provided by money from our trust fund.

Jane Marie Hamil

Head Nurse for Critical Care

Staffing on the Intensive Care Unit

There is no doubt that the single biggest cost in intensive care unit is staffing the unit and the biggest challenge is recruiting and retaining appropriately trained staff to provide safe and effective care to critically ill patients and their families.

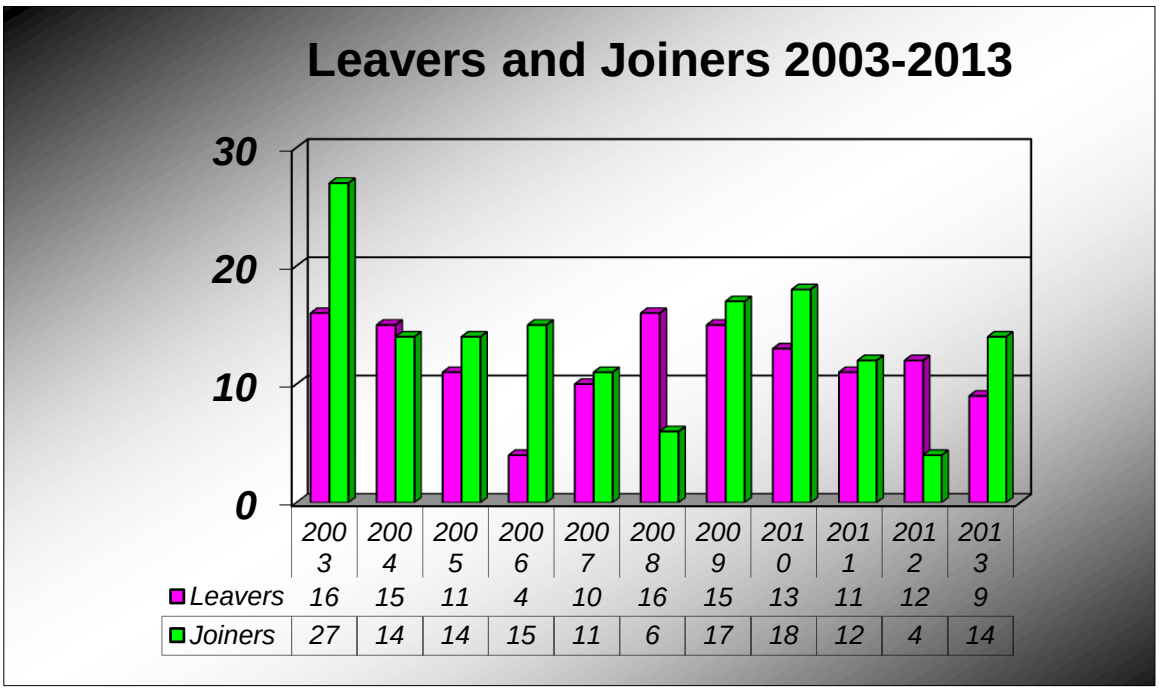
On Chelsea and Westminster Intensive Care Unit the staff provide expert nursing care to look after patients on the general and burns intensive care unit.

Currently the unit consists of 6 level 3(intensive care beds) and 4 level 2 (high dependency beds), as well as 2 level 3 adult burns intensive care beds. These can be used flexibly depending on the needs of the patient. We also have a policy of not refusing any admissions unless the staffing levels are such that patient safety is compromised.

Recruitment

It is extremely important therefore to keep on top of recruitment and be aware that the process can take a minimum of 6 weeks and maximum 4 months. On the unit we capture the number of leavers and joiners that occur in the year and over the previous years, see table 1. This helps us to identify if there are any trends.

TABLE 1: Leavers and Joiners in ICU in 2003-2013



In 2013 the number of leavers was spread out over the year. Time spent on the unit is shown in the table below. In 2013 there were 9 staff who left the unit.

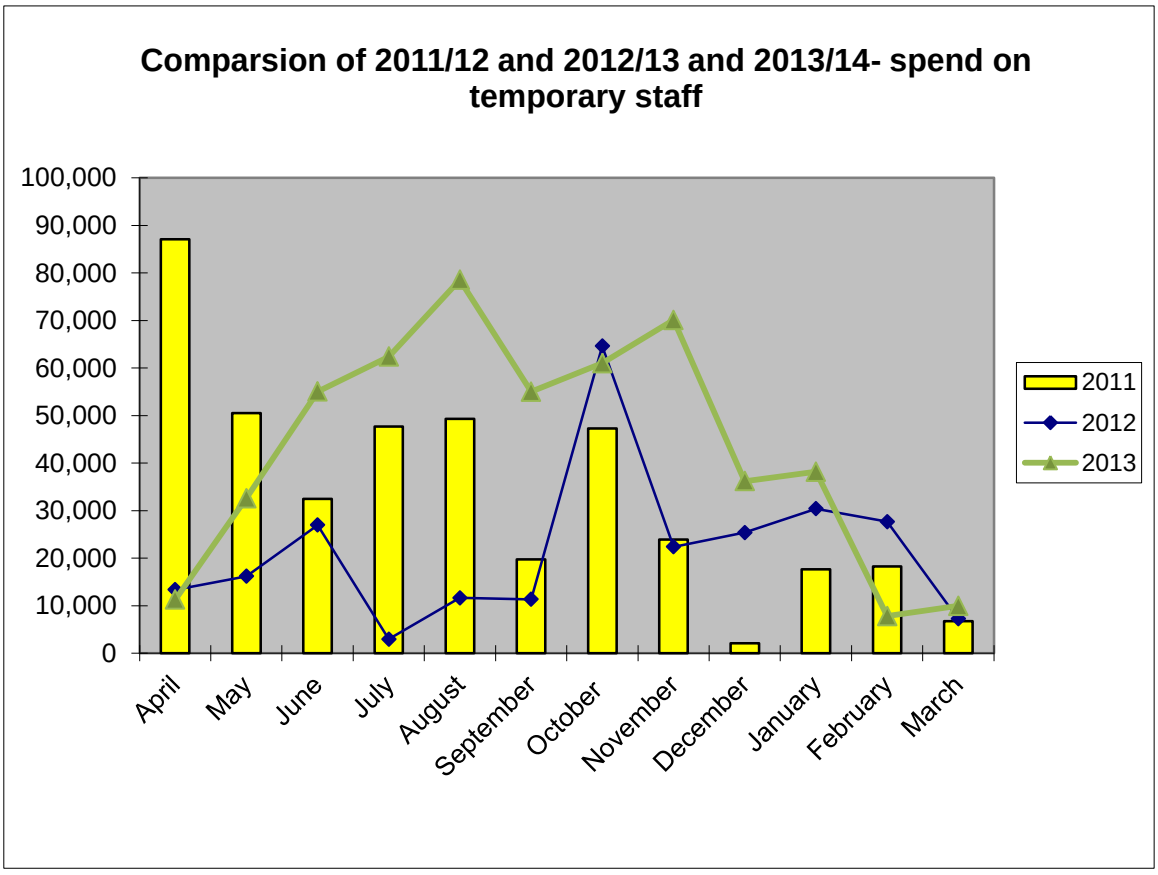
Time spent on the unit

Less than two years	Two years- five years	More than five years
1	7	1

The reasons staff gave for leaving where to relocate to another country (one nurse had been with us for 10years but it was time to return to her family in Singapore), three staff members were moving outside of London, one person wanted to get experience in a different hospital and one nurse felt that Intensive care was not the job for them.

If activity is high on the unit we have to supplement our staff with temporary staffing. In addition if we have a number of vacancies we may need to cover these vacancies with temporary staff under the post is filled.

Table 2 Agency and Bank Usage over the last three years



Retention

When talking about staffing equally important are plans for retaining staff and ensuring they receive the training and skills to do the job.

Each new recruit to the intensive of care unit are placed on a pathway relevant to their band. For example a new Band 5 nurse will commence the Band 5 pathway which involves completing the foundations programme which will lead to the intensive care course. After a period of consolidation they may undertake the mentorship course. These pathways give the staff structure on how to develop their knowledge and skills through formalized courses, project work and mentoring and helping others.

The aim of these structured pathways is to produce competent, confident expert nurses with excellent observational skills. This is important because the effective use of critical care nurses can greatly improve patient care, and reduce the incidence of complications for patients. Their observations skills can reduce the impact of sudden patient decline, for example and their holistic approach to care can change the experience of care for both patients and their families.

On our intensive care unit we want the critical care nurse to develop skills in stepping up and stepping down care, interventions and treatments so that we intervene when the patient requires more support but equally speed up the process of discharge.

In addition the structured pathways encourage and retain staff so that they are exposed to different situations and develop different skills. For example at Band 6 level the staff on the unit are expected to have active participation in interteam projects. One project is the off duty. Exposing staff to learning how to create a rota and balancing the needs of the unit with individual requests gives insight into the complexity of this task and indirectly helps the individual to gain skills in conflict management.

In relation to critical care units, it is imperative that local strategies are adopted in order to counter the pressure that exists and provide a supportive working environment that will enable the delivery of an efficient and effective critical care service. Over the next couple of years we may expand our service so crucial to this is the way we develop new posts and new ways of working.

Jane Marie Hamil
Head Nurse Critical Care

EXCELLENT

Inter-Team Project groups

The inter-team project groups in the ICU have always been used as a mechanism for all staff on the ICU to become involved in practice development, project management and enable changes to be implemented for the benefit of patients and staff members. The groups also enable staff members who work in our primary nursing teams to work alongside other colleagues.

The project groups have changed occasionally during the past according to different needs of the unit and changes in ways that we work. During 2014 a change to the project groups was instigated through the introduction of patient diaries. Our patient diaries were initially introduced as a pilot with some of the teams to see if they would work, with a positive evaluation a decision was made to roll them out to all the teams. This resulted in a considerable increase in work required to manage them and rather than overwhelm the pilot lead, it was decided that a new project group to help oversee the work would be formed.

This meant that one of the project groups would need to be reviewed. The senior nurses on the ICU felt that the work of the teaching group was now fully embedded in the ICU, with the CNS and staff development team providing much of the ongoing work in this area, so a decision was made to disband this group.

The patient diaries team now meets monthly and have made great progress in enabling the greater use of patient diaries to support our patients and staff and are kept up to date on education updates through a monthly update from the CNS.

Our project groups are likely to continue to develop as critical care nursing continues to evolve and adapt.

Elaine Manderson
Clinical Nurse Specialist

OFF DUTY PLANNING TEAM

The aim of the Off-Duty Planning team (ODPT) is to adequately staff the Intensive Care Unit with the appropriate number of staff and skill mix. The purpose of the ODPT is to provide the staff with guidance and support to facilitate self-rostering on the unit. Self-rostering is a system whereby nurses undertake responsibility for their working days and days off. The ODPT ensures that the self-roster system provides an adequate and safe level of appropriately qualified staff to ensure that quality nursing care is maintained at all time.

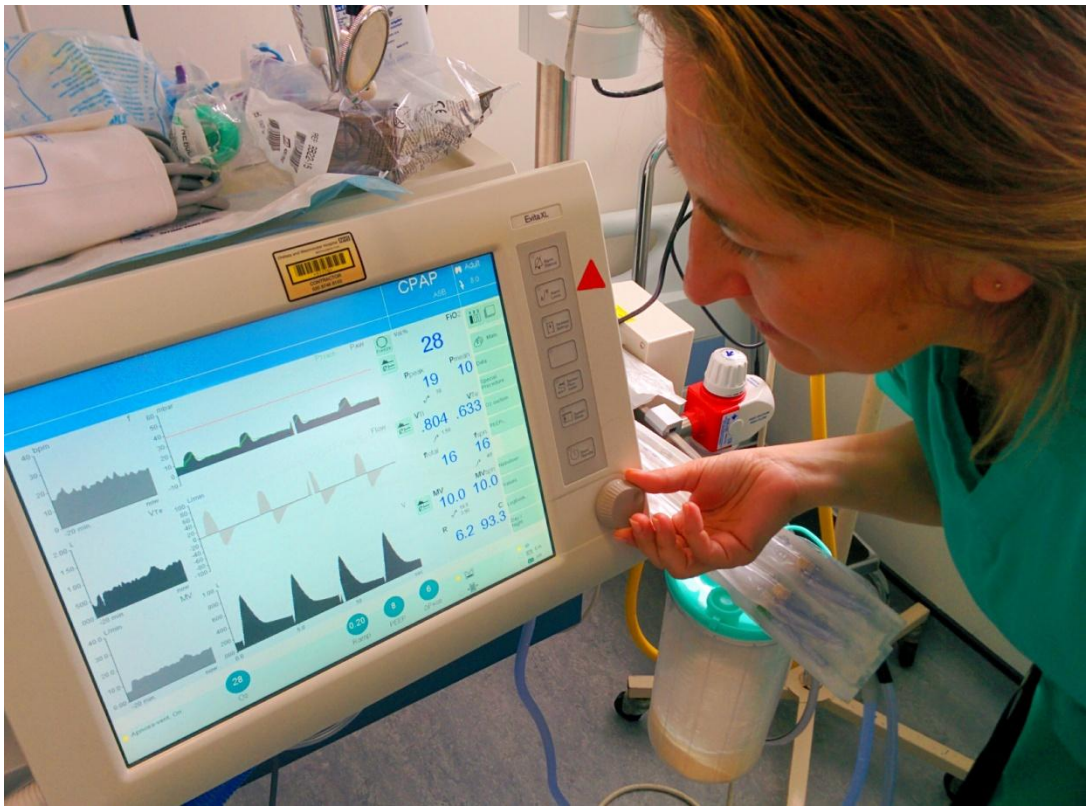
The ODPT recognises the importance of the home/work life balance. Therefore, negotiation is the key to the success of the self-rostering system and also a degree of flexibility. To ensure fairness self rostering requires an agreement regarding the number of night and weekend shifts in a four week period as well as a set number of guaranteed requests.

The roster is created 6-8 weeks in advance and a template is displayed for staff to complete ahead of time. This confirms flexibility with the rota and allows the ODPT to see where shift changes need to be made. The unit uses a computerised rostering system called MAPS. This has become a useful tool as it highlights the number of staff and co-ordinators on a shift at any one time plus provides quick access to the skill mix of a shift. The system automatically calculates staff working hours making it easy for shortfalls to be addressed and rectified. In addition, the system records study leave, sickness and annual leave which is also monitored by the ODPT.

The ODPT also manages the Annual Leave (A/L) requests, using a system that has been designed to ensure fairness and compliance. It has been agreed that the number of staff on A/L at any one time should be eight in order to ensure patient safety and maintain quality nursing care.
Staff are required to email the ODPT with their A/L request on a first come first serve basis. The ODPT then charts the requests on a monthly planner. This enables quick access for staff to see other A/L requests to help them plan accordingly. In addition, a new colour coding system has also been added to the monthly planner to highlight accepted A/L requests and those pending to avoid disappointments.

The ODPT comprises of a member of staff from each nursing team and meet on a monthly basis to discuss off-duty issues and roles. Each member of The ODPT is trained as a rota creator and each person will rotate every three months to become responsible for creating the rota.

Nneoma Ezeh
Staff Nurse



QUALITY GROUP

Admission to the Intensive Care Unit is extremely stressful for the patient their families and friends. The quality group has developed a number of strategies to try and alleviate some of the stress and anxieties experienced and improve the service we provide.

Focus groups have been extremely useful in understanding critical care from the patients' perspective. While the physical and psychological impact that a critical illness can have on the individual is well documented, actually listening to their stories is very powerful. Having a clearer understanding on what the patient experiences has refined our practice, with an emphasis on not just the physical care, but psychological care, based on what we have learnt from the focus groups over the years. An additional benefit of the focus groups has been that the patients themselves have told us that they find the meetings therapeutic, and we have increased the number of focus groups from three times a year to four.

This year we have re written our discharge booklet, re naming it 'The road to recovery' that we give to all our patients on discharge. It includes information on what to expect once they have been discharged from the intensive care unit and hospital, and is based on what patients have told us in the focus groups.

Our relative's satisfaction surveys have been refined and made easier to complete, and we have found that the response rates have increased. We also post out surveys to boost response rates. Our volunteer, Caroline Heslop, evaluates the results, and feeds back to the Unit via the Quality group. We continue to get very positive feedback from relatives and friends.

On a more practical level, we have developed discharge packs, similar to our admission packs to facilitate accurate and smooth discharge from the Unit. They include the 'Road to recovery' booklet and information on 'VIC'. We also keep information folders and boards updated, and review their content regularly.

A new scheme is the Virtual Intensive Care (VIC), where relatives, friends or patients can e mail questions or queries to us and we will respond within two days. The aim is to provide an alternative way to offer information and support to those with a loved one in our Unit.

Thank you to all of the members of the Quality group for their work over the last year.

Rebecca Hill
Staff Development Sister

TISSUE VIABILITY GROUP

The aim of the Tissue Viability Group is to provide information and education for the ICU nursing team with regard to pressure ulcer prevention and wound care.

Early this year the group was involved in implementing an adapted version of the North West Thames Critical Care Skin Bundle (2013). The skin bundle provides a written record which demonstrates the assessment of key pressure points every 2-4 hours; patient repositioning and attending to factors such as nutrition, hydration, skin hygiene and continence. The assessments also include monitoring areas of the patients' skin where the presence of medical devices can cause pressure damage, such as oxygen masks, feeding and drainage tubing.

Additional documents are used to describe any skin damage or abnormality observed when a patient is admitted or discharged. This process ensures meticulous assessment and good communication between the ICU and ward staff.

As with many areas of practice within ICU, the Tissue Viability Group has devised an audit tool to ensure compliance and maintain good practice. The first two audits have demonstrate good compliance, and we hope to demonstrate a decrease in the incidence of avoidable pressure ulcers.

In May this year, together with our Tissue Viability Nurse Specialist, the Group was invited to co-ordinate an evaluation of the Nimbus 4 (N4) alternating pressure mattress (APM) provided by the Trust's current bed management provider.

APMs are used for patients at risk of developing pressure ulcers to reduce pressure over the body surface area. However, the interface pressure between the heel and the mattress surface remains high and pressure ulcers may develop on the patients' heels. As a result, ICU nurses use additional devices such as foam boots to protect this area, however some patients find the boots hot and uncomfortable.

The N4 mattress has unique 'wound valves' at the foot end, which enable one or more of the air filled cells to be deflated. This allows the patients' heels to be suspended over a deflated cell providing total relief of pressure.

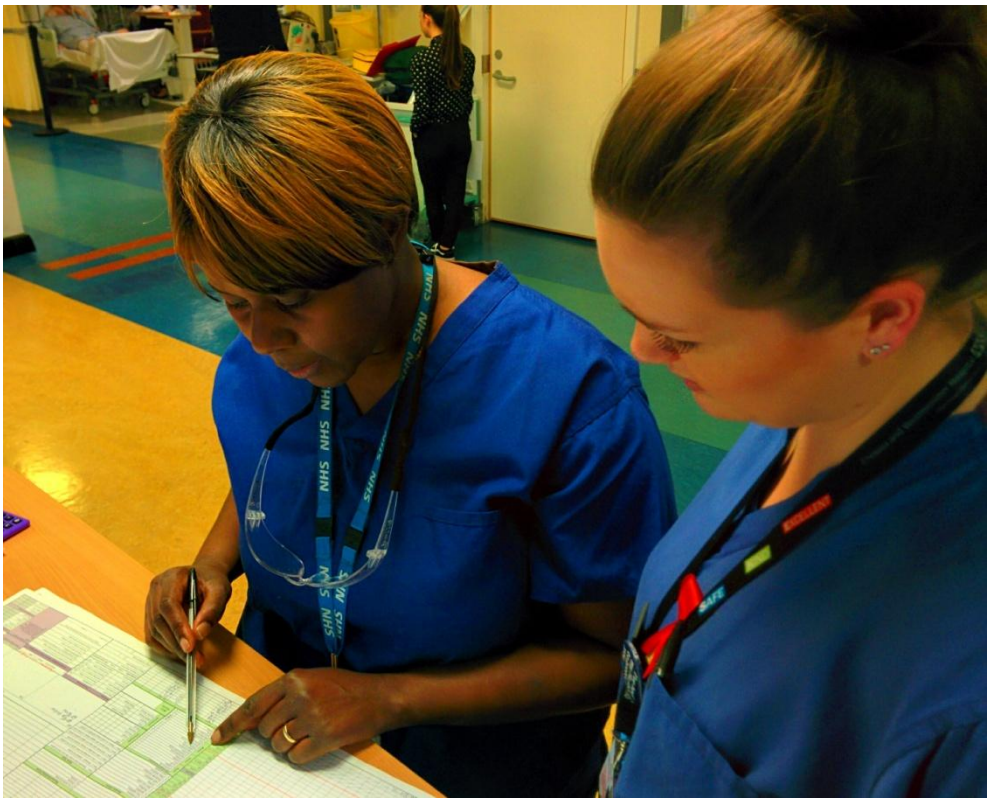
The N4s were used by patients admitted to ICU over a 10 week period. Staff were given information about the air mattress and how to deflate the air cells using the wound valves. Staff were able to feedback their experiences via a questionnaire or one to one interviews with the TV team.

During the evaluation none of the patients using the N4 developed a pressure ulcer, and staff observed that the wound valves provided effective pressure relief, although vigilance was required to adjust the position of the heels over the deflated air cells if the patient's position changed. An article describing the evaluation was published in the British Journal of Nursing.

The work on the Tissue Viability Group remains an on-going process, as ICU and HDU patients remain at high risk of pressure damage due to critical illness, and the group will continue to develop and evaluate practice over the coming year, maintaining strong links with the Trusts Tissue Viability Nurse Specialist.

Masterson S. and Younger C. (2014) Using an alternating pressure mattress to offload heels in ICU. British Journal of Nursing 23.(Sup15), S44-S49

Caroline Younger
Sister - Team B

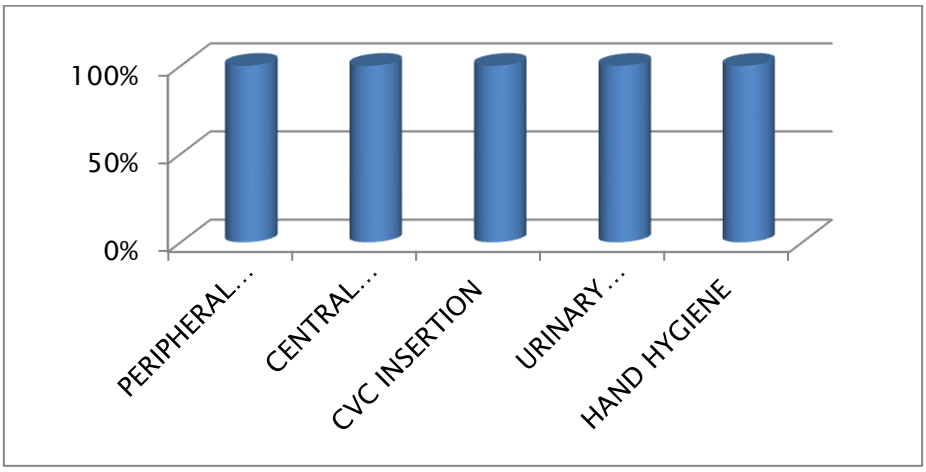


INFECTION CONTROL GROUP

Infection control continues to be a challenging area for critical care and the intensive care environment. The patient group we care for is susceptible to infection and many of the therapies we provide, whilst being lifesaving, can increase the patient's risk of acquiring an infection. Organisms are continuing to become more resilient to therapies, and therefore infection control in the intensive care environment is paramount not only for protecting patients but ensuring staff are protected as well.

The infection control inter-team project is well established inter-team project. The role the team plays has become more dynamic over the years from completing saving lives audits, to education staff at bedside, formal teaching and now utilising our infection board to display areas of interest (Saving lives, MRSA), topically poignant (flu season) or as a way to inform staff of new hospital procedures (introduction of c. diff packs) .

The group is responsible for collecting data and I am pleased to note a high compliance within the saving lives audits of peripheral venous catheter care (93%), central venous catheter care (91.6%), central venous catheter insertion (98.3%), urinary catheter care (95%) and hand hygiene continues this year.



With more members having completed the Infection Control Link Professional (ICLP) course run by the Trust, it empowers them to be more confident with auditing and acts as a local resource to staff within the unit. In the coming year we hope to have a majority of members completing their ICLP course and their project work will contribute to improving infection control practice with in the unit.

EMMA LONG
SISTER - TEAM A

INFECTION CONTROL LINK NURSE (ICLN):

The role of ICLN:

• To establish effective, channels of communication between the clinical unit and the infection control team.

• To help implement and evaluate an effective infection surveillance system.

• To assist in the optimal prevention and management of infection and to improve the quality of patient are in clinical units.

• To increase awareness of optimal approaches to infection prevention and management in clinical practice.

Duties of ICLP:

• Provide accurate information regarding potential or actual infection control problems to the Infection control Team and assist in outbreaks as required.

•Devise, implement and evaluate infection surveillance projects within the relevant clinical unit, eg:

• Hand washing, peripheral line, catheter & CVC monthly audits

• Correct usage of protective equipment

• Correct application of additional precautions

• Management of sharps and waste

• Screening practices for multi-resistant organisms

• Provide education to staff of the clinical unit/s in relation to infection control practices.

• Monthly meetings of the ICLN

Laura Giron

Senior Staff Nurse -Team I

RESEARCH GROUP

The Research Group has continued to meet on a monthly basis on the first Thursday of every month. However, attendance has been variable mainly due to workload of the Intensive Care Unit but also due to Senior Staff arranging their team days on the same day making it difficult to release people from the bed area to attend meetings. This issue is being addressed, but has meant a reduction in the number of guidelines completed during the past year.

Nevertheless, Oral Care, Capnography and the delirious patient have been ratified and added onto the Trust list of Guidelines. The introduction of CAM-ICU has meant that the guideline related to the delirious patient will have to be reviewed to incorporate this new assessment tool. Suctioning and the Sedated Patient have been reviewed and ratified. New guidelines covering aspects of clinical practice have been identified including, Neurological Observations, Interventions to promote the care of the patient with a Neurosurgical problem and the use of BiSpectral Index Monitoring (BIS)and Acute Kidney Injury (AKI), incorporating recent NICE guidelines. The use of the bowel management system and general bowel management will also be reviewed.

The Research Group remains committed to staying up to date with relevant research regulations, policies and procedures and acting as a link between the Research and Development department and the Intensive Care Unit. The group also provides support and guidance for staff, patients and the public. Furthermore, the Research Group continues links with the Research Nurses attached to research studies that are currently being undertaken in the Hospital and involve patients admitted to the Intensive Care Unit. Studies which are ongoing linked to ICU are the Ventilator Acquired Pneumonia (VAP) Study, which is in its second phase and Vasopressin and Noradrenaline in Initial Therapy in Septic Shock (VANISH) which has just commenced.

I would like to thank all members of the Research Group for their contribution over the past year.

Ann Sorrie
SISTER - TEAM H

Foundations of Critical Care (FOCC)

The transition from ward based nursing to an intensive care environment can be both difficult and stressful. The entrant ICU nurse may feel disempowered by a lack of specialist knowledge and skills. A structured programme of learning which provides support, supervision, guidance and reflection can facilitate this transition allowing nurses to gain an understanding of the unique needs of critically ill patients and to become an effective member of the multidisciplinary team.

The FOCC is based upon the National Competency Framework for Critical Care Nurses (2012), which comprises of three steps. At Chelsea and Westminster the FOCC is step 1 of the competencies. It is recommended that all Step 1 competencies should be completed within 12 months. The course itself runs over a six month period, with one study day per month, with an extra six months to finish the competencies in total. Step 2 & 3 Competencies should be completed during the period of an academic Critical Care programme where 'the learner' will gain the necessary depth of related theory and knowledge. Our nurses undertake this course at Kings College, London.

The study days mainly cover Respiratory, Cardiovascular, Gastro-intestinal, Neurological, Renal and Burns Information. In the last 12 months, 8 new Band 5's have successfully completed the FOCC at Chelsea and Westminster. The course was revamped 6 months ago, to ensure it fits with the National Competency Framework, and is being evaluated now the first nurses have completed it. The main differences to the existing course were the introduction of the Gastro-Intestinal study day and competencies and expansion of the Neurological competencies. It has been evaluated well, with nurses particularly liking scenario and workshop based teaching.

The Staff Development Sister (s) who run this course, do so for two courses and then it rotates to another sister on the unit. Soon all the sisters here will have undertaken this role. As well as organising and teaching on the study days, they work with the nurses at the bedside, assessing their skills and knowledge. Other nurses on the unit are encouraged to teach on the study days, as part of their development. This is also well evaluated as the junior nurses get to see their colleagues in a different light and they feel able to approach them more easily with questions.

Danielle Pinnock & Geraldine Fitzgerald O'Connor
Practice Development Sisters

NATIONAL COMPETENCIES FRAMEWORK FOR ADULT CRITICAL CARE NURSES (NCFFACCN) AND OUR FOUNDATIONS OF CRITICAL CARE

In late 2012 the Critical Care Network – National Nurse Leads (CC3N) launched some national competencies for adult critical care nurses. These consist of fundamental clinical competencies that are required by nurses in order to provide care for adult patients in ICU. They are designed to be used by registered nurses who are starting of their careers in critical care nursing and will be able to link into educational courses used by universities who provide intensive care nursing courses.

Since the introduction of these competencies, we have spent time reviewing our in-house training course, the Foundations of Critical Care Course (FOCC) to ensure that our new staff members in ICU here at Chelsea and Westminster are using step1 of the competencies.

This involved the rewriting of our clinical competency booklet to match to the NCFFACCN and also restructuring the content of the study days that the new staff members attend. The first cohort started on the 'new' FOCC in April 2014 and we look forward to seeing how they get on.

Once staff has finished the FOCC they will then be able to access steps 2 and 3 of the national competencies:

- Step 1 FOCC linked to NCFFACCN
- Step 2 Physiology module at Kings College London
- Step 2/3 ICU module at Kings College London
- Step 2/3 Mentorship module

We will continue to review the FOCC and ensure they are kept in line with national guidance and the changing demands of critical care services.

Elaine Manderson

Clinical Nurse Specialist

Customer Service Excellence 2014

The ICU has successfully held a customer service award (firstly the Charter Mark and latterly the Customer Service Excellence award) since 1998. Every four years we have an onsite review compliance check to ensure that we are still meeting the levels required for the five criteria for the award, which are customer insight, culture of the organisation, information and access, delivery and timeliness, and quality of service.

This last year our four yearly onsite visit from an assessor took place on the 4th March 2014. During the visit the assessor met with the nursing team, senior management team, and other departmental staff that work with the ICU team in providing care to our patients and visitors. The assessor also met ex-patients who were attending a Patient Focus Group and an ex-patient who had made a formal complaint was also interviewed by telephone.

The assessment demonstrated that the ICU were fully meeting all the criteria and that we were beacons of excellence in three assessment areas. They felt that our strengths included:

- The use of Patient Diaries and Focus Groups to gain insight into our patients needs
- The way we have brought our new values to life and how we made examples of how we demonstrate these values. In addition, we use the values as reference points to monitor required associated behaviours right from the recruitment of personnel through their ongoing employment
- Staff demonstrate positive attitude and commitment to giving excellent customer service and who display a desire to resolve issues right-first-time wherever possible
- The Corporate wider Hospital believe that senior managers within the ICU are role models of customer excellence and continuous improvement and that the ICU is seen as a beacon of customer excellence across the Hospital and always show a willingness to share best practice

They went on to suggest some areas that we could focus on continually improving:

- To consider ways we could use to measure politeness, friendliness and patients being treated fairly more explicitly than we do just now.
- To continue to promote our values e.g. by including them in our patient admission information.
- Consider embedding our values further by linking them to value based ‘star awards’ for our staff.

- With AskVIC (our email information service- askVIC@chelwest.nhs.uk) we should monitor usage, timeliness and trends regarding the requests.

Each of these areas will be considered by our quality improvement interteam project group in the coming months.

Elaine Manderson
Clinical Nurse Specialist

Jane-Marie Hamill
Head Nurse Critical Care

APPRENTICE ROLE IN ITU

After three years working on a medical ward, I made the transition to the Intensive care unit at Chelsea and Westminster hospital. I had a vague idea of how my role would change but it was very strange going back to being a student again and essentially feeling like I knew nothing. There are huge differences between nursing in ICU and on a ward, and the transition is not a particularly easy one. The apprentice role that I undertook helped by providing me with a four week supernumerary period where I was able to work with experienced ICU nurses. This gave me the breathing space to adjust to my new working environment and allowed me to learn from other members of staff before being directly responsible for patients.

During my first year I also undertook the foundations of critical care course (FOCC). This course is specifically designed to provide a solid knowledge base for new starters in ICU. It covers the major organ systems - including anatomy, physiology, pathophysiology and the supportive interventions and equipment used on the unit. This was extremely helpful as I was able to link theory with the practical side of the job, both learning and implementing skills at the same time.

I enjoyed undertaking the apprentice role as it gave me the opportunity to learn new things as a nurse and I would like to thank all the staff who helped teach and organise it. I look forward to continuing my ICU career at Chelsea and Westminster intensive care.

Taniel Sarafyan
Staff Nurse - Team I

Staff Development and Education

We have an ongoing commitment to staff development and education this past year has a number of the unit staff to continue to do this by undertaking further study. The unit supports a number of courses that staff may undertake. These are outlined in the table below:

Courses	Details	Number of staff undertaking course
Foundations of Critical Care	Six month course which aims to provide a structured learning experience that enables nurses new to the intensive care environment to develop the knowledge and skills necessary to safely and competently care for critically ill patients.	12
Physiology for Nursing Practice	A course consisting of four study days run by Kings College London which develops the knowledge and skills related to the altered physiology of the critically ill patient.	12
Intensive Care Nursing	This is a twelve week course run by Kings College London which builds upon the development of knowledge and skills from the Foundations of Critical Care and physiology modules	12
Mentorship	Three month course that prepares staff members for the role of coaching and supporting staff in the clinical environment	4

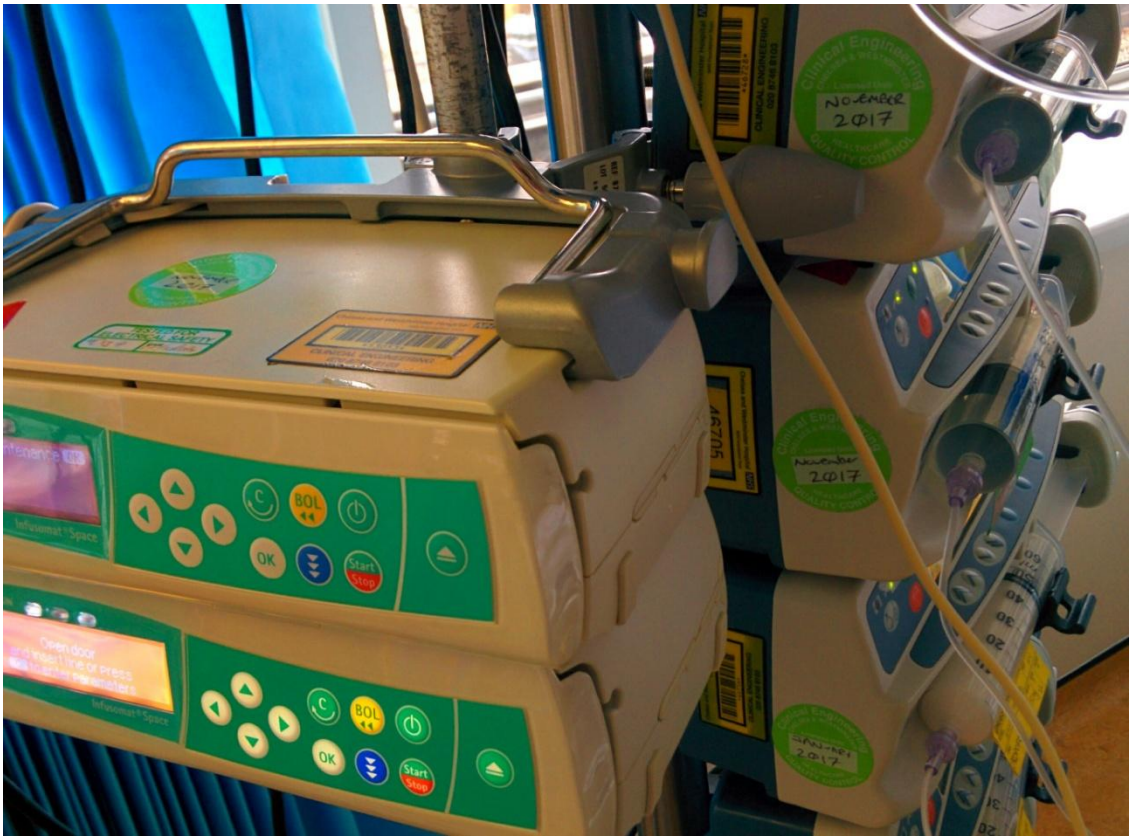
Our pre-registration nursing provider universities (London South-Bank University and Kings College London) continue to send student nurses to the unit for placements. The collaboration with the two universities has been very successful with many students joining the unit for placements during 2013/14. The placements last between four and twelve weeks and have been very positively evaluated by students and staff alike.

Our mentorship programmes continue to run with in the trust and accredited Kings College University. This prepares our staff to support all learners in the intensive care environment.

We have also support medical students from Imperial College London, who join us for two week placements. During their placement they develop an appreciation of intensive care through spending time with our medical and nursing staff.

The development of staff is of paramount importance to the unit and is made explicit through the unit's values. It is hoped that through the continued development of our staff we will be able to deliver effective, patient-centred care.

Elaine Manderson
Clinical Nurse Specialist



RESEARCH UPDATE BY RESEARCH FELLOW

Microvesicles in severe burn injury

Severe burn injury is a unique example of critical illness, where the early phase is characterised by an exaggerated inflammatory response. Pro-inflammatory mediators are elevated in the initial stages but do not necessarily correlate with clinical progress [1]. Moreover, the pathway that leads from local mediator release to systemic inflammation is undefined. Microvesicles (MVs), sub-cellular membrane-bound particles released by activated or dying cells, may play a role in this pathway. Elevated levels of leukocyte-derived MVs have been demonstrated in pro-inflammatory states such as sepsis but they have not been assessed in patients with burn injury.

Methods

Patients admitted to the Burns Intensive Care Unit (BICU) were prospectively studied. Demographics were recorded including Total Body Surface Area (TBSA) burned. Blood was sampled within 24 hours of admission and centrifuged to remove cells. Soluble inflammatory mediators were quantified using a cytokine antibody array. MVs were quantified by flow cytometry.

Results

8 BICU patients were recruited (4 males) and mean age was 48 ± 23 years. Mean TBSA and Abbreviated Burn Severity Index (ABSI) were 27 ± 12% TBSA and 7.6 ± 2.3 respectively. In comparison to healthy volunteers (n=4), levels of plasma leukocyte and neutrophil MVs were significantly elevated (Figure 1A and 1B). There was also a trend towards increased counts of monocyte MVs (Figure 1C).

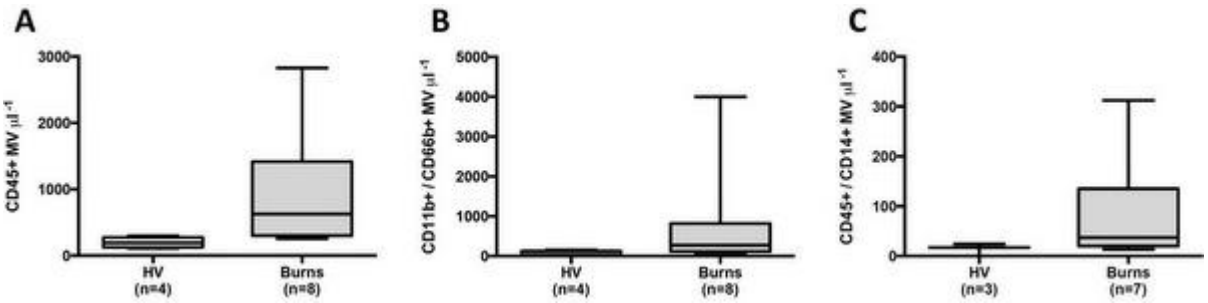


Figure 1: Levels of leukocyte microvesicles in healthy volunteers and burn patients. A) CD45+ MVs (p=0.016) B) CD11b+ / CD66b+ (p=0.016) MVs C) CD45+ / CD14+ MVs.

Conclusions

Severe burn injury was associated with significantly elevated levels of leukocyte-derived MVs, the majority of which appear to be neutrophil-derived. The role of these microvesicles in propagating inflammation following severe burn injury warrants further investigation.

Grant acknowledgements

Funded by the Chelsea and Westminster Health Charity

Authors

Porter J, O'Dea KP, Singh S, Takata M

John Porter

Clinical Research Fellow

PROMISE

Chelsea and Westminster Hospital has recruited 16 patients for the PROMISE (Protocolised Management in Sepsis) trial. The trial started May 2011 and ended July 2014. The total number of patients recruited to the trial for more than 50 sites is 1,260. All the sites are closed for recruitment as the target has already been met. Last step before data analysis phase would be formal study close out announcement from the study Sponsor.

The VANISH TRIAL (Vasopressin vs. Noradrenaline as initial therapy in Septic Shock) is open for recruitment since August 2014. The aim of this study is to test if vasopressin reduces renal dysfunction compared to noradrenaline when used as the initial vasopressor in the management of adult patients who have septic shock and to test if there is an interaction between vasopressin and corticosteroids when used in the management of septic shock. In preparation for this study, nurses were given face to face training in drug preparation and administration, doctors /nurses/pharmacists were trained to be part of the study team log (delegated duties) and patient referral system was established.

The success of a research study lies on the support given by the department. Chelsea and Westminster Hospital Intensive Care Unit have always been very open and supportive to staff involvement in participating in any research activities within the department.

Jaime Carungcong
Research Nurse

VAPrapid 2 Study

Ventilator associated pneumonia (VAP) is associated with higher mortality than any other nosocomial infection. Several non-infective conditions can however mimic VAP and significant infection is usually confirmed in less than 40% of suspected cases. Currently, there are no tests available to reliably exclude VAP at the point of clinical suspicion, and microbiological results are returned up to 72hours later. Consequently, while empirical broad-spectrum antibiotics are routinely administered, most patients with suspected VAP do not have pneumonia. This means that patients may receive unnecessary antibiotics for several days, promoting emergence of 'superbugs'. (Newcastle upon Tyne Hospitals NHS Foundation Trust 2013)

Recent studies have now demonstrated that a new, simple test can rapidly and confidently exclude VAP. This new test looks at specific proteins (biomarkers) in the lung fluid of those patients with suspected VAP which can yield a result within 6hours, thus improving patient care and the use of unnecessary antibiotics.

Chelsea and Westminster Intensive Care Unit have already done a great deal of work towards the diagnostic accuracy of VAP and the next phase of this study is now well underway. VAPrapid 2 is a randomised controlled trial that will determine whether biomarker-based recommendation on antibiotics (versus routine use of antibiotics) will improve antibiotic stewardship in suspected ventilator associated pneumonia.

Once a patient has met the diagnostic criteria for clinically suspected VAP, we perform a bronchoscopy, or camera test of the lungs, which collects lung fluid used to test for infection. We also take a blood sample and record information from the medical records and charts. This lung fluid is then used to test for infection.

As the aim of the study is to establish whether the additional use of this rapid test leads to patients getting fewer or more antibiotics, we require studying antibiotic use in two groups - one getting the standard infection test, the other getting the standard infection test *and* the new test. The patient is therefore randomised into either 'biomarker-guided recommendation on antibiotics' or 'routine use of antibiotics'. In the 'biomarker-guided recommendation on antibiotics' group, patients lung fluid will be processed for biomarkers and a result should return within 4-6 hours. The clinical team will then be advised whether the result indicates a high likelihood of excluding VAP and a recommendation on antibiotic use made.

VAPrapid was site initiated on the 14th October 2013 and the first patient was recruited here on 18th February 2014. Nationally, VAPrapid 2 has recruited 79 patients across 15 sites to date. Chelsea and Westminster Hospital, have recruited 14 of these patients so far and recruitment is on-going - our overall target is to recruit 20 patients by 31st May 2015. September in particular saw a spurt of recruitment here at Chelsea, which was recognised by the sponsor of the study, Newcastle upon Tyne Hospitals NHS Foundation Trust, in a recent study update report.

Dr Suveer Singh, Consultant Physician in Critical Care and Respiratory Medicine, is the principal investigator on this study and works closely with a number of other professionals including research fellows, research technicians and research nurses to ensure smooth, timely and precise running of the study. All members of the team are experienced, qualified members of staff, who have undergone ICH GCP training and have experience in research.

As a research associate (nurse) working on VAPrapid 2, I play an active role in the maintenance of the study - working in accordance with local, national and international legislation within intensive care. Patients are screened daily and their suitability for the study assessed. Once they have been identified as eligible for participation, we then make every attempt to seek either informed consent from the participant or informed assent from their next of kin should the patient be too unwell.

It is also my role to coordinate the logistics for patient visits and undertake patient assessments in accordance with study protocol. I also record data, working in line with ICH-GCP, deliver the study in line with agreed targets, resource manage and educate staff to ensure that we meet high quality working practices and facilitate the knowledge and development.

I have been in post since August 2014 and am thoroughly enjoying my new role. I previously worked on intensive care, as a senior staff nurse, and have been fortunate enough to be given the opportunity of secondment from my post. The move to research will enable me to expand my knowledge and skills and will help me to develop personally and professionally. I have already had the opportunity to build on my education and training, and am currently working toward building my competency base through use of the 'Competency Framework for Research Nurses'.

I would like to take this opportunity to thank everyone who has helped and supported me in this new, exciting and challenging role. I really believe that, as a team working collaboratively, we can help the NHS to improve the current and future health of the people it services.

Sophie Holmes

VAP rapid Research Nurse

NORTH WEST LONDON CRITICAL CARE NETWORK (NWLCCN)

The ICU continues to work with the NWLCCN in developing intensive care services through our North West London. This is most notably through assisting with transfer training for staff; this trains ICU and A&E doctors and nurses to be able to provide safe and competent care of critically ill patients if they need to be moved to another hospital's intensive care unit.

During 2014 we were also working with NWLCCN in developing a website resource. This covered all aspects relevant to critical care including clinical care and guidelines, policy development, organisation and education. The website was designed to meet the need of staff working in ICU, but will also is a site that patients and their families can access to provide them with information that may be of help for them. The website can be accessed on the following web link: http://www.londonccn.nhs.uk

Looking ahead to 2014/15, the NWLCCN hopes to introduce a standardised transfer bag (equipment bag used during a transfer of a patient) for all ICU'sand A&E's to use, so that staff moving around the hospitals in North West London are all familiar with what equipment in in the transfer bag and where to locate it.

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