

July 2008
Volume 3 Issue 2

**British Association
Of
Neuroscience Nurses**

THIS ISSUE

Welcome to tHeadlines.

Since the last edition the BANN Board have been working away at updating BANN documentation. There are changes to the constitution which is available on the website. The annual report is also available on the website www.bann.org.uk

BANN is also planning a new logo which will be launched at the conference in Leeds, October 31st – November 2nd 2008. At the AGM the BANN poster will be launched and it will be available for display in all Neuroscience units.

The BANN 2007 conference held in Birmingham was a resounding success, Anne Preece has reported on the findings of the evaluation and the presentations will be available on the new BANN website when it is launched.

In this issue of Headlines there is a section on conferences related to Neuroscience care.

There is an article on the European Sexual Alliance, A GCS audit from Cath Waterhouse, a review of Benchmark No 15: an introduction to early management of spinal cord injury by Lillian Ford and a summary of Neuroscience nursing organisations throughout the world.

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Neuroscience conferences

Here are a list of interesting conferences with a wide range of topics related to neurosciences. You may wish to take advantage of the pound dollar exchange rate and attend one of them.

I quite fancy 'The molecular genetics of aging...' to be held in New York in september! I do hope they find a cure for this side effect I'm experiencing.

July 2008

- o **Young Physiologists Symposium 2008: Integrated Approaches to Neuroscience**

- July 12, 2008 - July 13, 2008 University of Cambridge, UK
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- **6th Forum: Federation of European Neuroscience Societies**
 - July 12, 2008 - July 16, 2008 Geneva, Switzerland
- **International Professional Conference on Williams Syndrome Research**
 - July 13, 2008 - July 14, 2008 Garden Grove, CA, USA
- **Glia in Health & Disease**
 - July 17, 2008 - July 21, 2008 Cold Spring Harbor, NY, USA
- **Alzheimer's Association International Conference on Alzheimer's Disease**
 - July 26, 2008 - July 31, 2008 Chicago, IL, USA

August 2008

- **Gordon Research Conference: Mechanisms of Epilepsy & Neuronal Synchronization**
 - August 3, 2008 - August 8, 2008 Colby College, Waterville, ME, USA
- **Methods in Computational Neuroscience**
 - August 3, 2008 - August 31, 2008 Marine Biological Laboratory, Woods Hole, MA, USA
- **Graduate Research Seminar: Neuroethology**
 - August 9, 2008 - August 10, 2008 Magdalen College, Oxford, UK
- **Gordon Research Conference: Neuroethology: Behavior, Evolution & Neurobiology**
 - August 10, 2008 - August 15, 2008 Magdalen College, Oxford, UK
- **Gordon Research Conference: Visual System Development**
 - August 10, 2008 - August 15, 2008 Newport, RI, USA
- **Neuroinformatics**
 - August 16, 2008 - August 31, 2008 Marine Biological Laboratory, Woods Hole, MA, USA
- **Gordon Research Conference: Brain Energy Metabolism &**

Blood Flow

- August 17, 2008 - August 22, 2008 Andover, NH, USA

○ **Gordon Research Conference: Neural Development**

- August 17, 2008 - August 22, 2008 Newport, RI, USA

○ **Gordon Research Conference: Neurobiology of Brain Disorders**

- August 24, 2008 - August 29, 2008 Magdalen College, Oxford, UK

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September 2008

○ **Neuroinformatics 2008: the 1st INCF Congress of Neuroinformatics**

- September 7, 2008 - September 9, 2008 Stockholm, Sweden

○ **Infectious Diseases of the Nervous System: Pathogenesis and Worldwide Impact**

- September 10, 2008 - September 13, 2008 Paris, France

○ **Axon Guidance, Synaptogenesis & Neural Plasticity**

- September 10, 2008 - September 14, 2008 Cold Spring Harbor, NY, USA

○ **What Can Computer Vision Do for Neuroscience and Vice Versa**

- September 14, 2008 - September 17, 2008 Janelia Farm, Ashburn, VA, USA

○ **Molecular Genetics of Aging**

- September 24, 2008 - September 28, 2008 Cold Spring Harbor, NY, USA

October 2008

○ **Integrative Approaches to Brain Complexity**

- October 1, 2008 - October 4, 2008 Wellcome Trust Genome Campus, Hinxton, UK

○ **Autism Neuroscience Conference: From Genes to Cognition in Autism**

- October 6, 2008 - October 7, 2008 The Royal Society, London

○ **Behavioral Neurogenetics of Drosophila Larva**

- October 19, 2008 - October 22, 2008 Janelia Farm, Ashburn, VA, USA

○ **Mouse Genetics & Genomics: Development & Disease**

- October 29, 2008 - November 2, 2008 Cold Spring

Harbor, NY, USA

November 2008

- **Genetic Manipulation of Neuronal Activity**
 - November 2, 2008 - November 5, 2008 Janelia Farm, Ashburn, VA, USA
- **Learning and Memory: A Synthesis of Flies and Honeybees**
 - November 9, 2008 - November 12, 2008 Janelia Farm, Ashburn, VA, USA
- **Society for Neuroscience 38th Annual Meeting**
 - November 15, 2008 - November 19, 2008 Washington, DC, USA

December 2008

- **Blood/Brain Barrier Physiology: Neural Boundaries and the Molecular Mechanisms of CNS Protection**
 - December 1, 2008 - December 4, 2008 Cold Spring Harbor, NY, USA
- **Neurodegenerative Diseases: Biology & Therapeutics**

NY, USA

December 4, 2008 - December 7, 2008 Cold Spring Harbor,

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**Neuro Intensive Care Unit
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April 29th 2008.**

Dear Editor,

You will recall that I wrote recently to inform you about the relocation of our unit and the issues surrounding this momentous move.

Since then we are committed to expanding the unit so allowing us to deal with the demands of the patient population rather than being restricted by the size of the facility.

Age old problems are constraining our expansion however. I would like to ask your readers a question which I hope will stimulate discussion and may be some remedies and answers.

We all employ and develop nurses in the essence, arts and skills of caring for our speciality patients. We all invest time and energy in them through mentoring, teaching courses and study days.

They then move on and a new inexperienced Neuro Nurse replaces them – where do these skilled experienced practitioners go?

Recent adverts for my unit result in 60 applications – all novices to ICU, looking for Band 5 posts. This is great to be able to appoint those that fit our criteria and to support their development. However Band 6 nurses, which for me in Neuro ICU means a nurse with a Neuro or ICU course, there are sporadic applicant many with inadequate experience or training.

There are few applicants and most are internal to my area. Fantastic I say as it gives me great pleasure to promote staff and see them fulfil ambitions and potential. But we all need new blood and external stimulation but that blood is a rare group.

So my questions are:

1. Are there really nurse retention issues in Neuro or are we all expanding?
2. How can we lessen the impact of this e.g. by encouraging nurses who leave one Neuro unit to move to another Neuro unit through good links at sister/manager level and supported by BANN so that at least the speciality benefits from this experience.
3. How can we attract suitable experienced nurses into Neuro?
4. What does 'fast tracking' or 'growing your own' mean to you? Is this jargon or a reality? Does it work?

I am writing this as I prepare to retire from a career in Neuro but I look forward to hearing your readers replies and comments and discussing this further at the BANN conference in Leeds. Please direct your replies to Headlines editor.

Yours sincerely,
Kate McArdle
Matron

**British Association
Of
Neuroscience Nurses**

Remember there is a £20 book token for articles printed in Headlines. The next edition will be following the conference. Articles for inclusion should be e-mailed to the editor shanne.mcnamara@luht.scot.nhs.uk

Finally, Kate McArdle is retiring in July, I am sure you will all wish her the very best.

Thankfully she plans to stay on the BANN Board for a while which means we can continue to benefit from her experience.

Kate has written a letter for Headlines and would appreciate your feedback, once again these can be directed to the editor.

More specifically for a nursing audience.....

**2008 British Association of Neuroscience
Nurses Annual Conference - Leeds
31st October - 2nd November
"The Patients Progress"**

Meeting the needs of the Neuroscience patient.

And for those with an interest in Neuro-Oncology

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European Sexual Dysfunction Alliance

Did you know that common health problems can be associated with your sex life? **Diabetes, depression and hypertension** are just some of these. All recent data prove that a healthy sex life can indicate general well-being. And do we want to find out more? Do we consider it as one of our problems? The European Sexual Dysfunction Alliance (ESDA) wants to remind everyone of the importance of sexual health as a part of overall health and show what as an alliance we have just found out!

What Is ESDA?

ESDA is an umbrella organisation for patient support help-lines across Europe. These organizations exist to provide sufferers and their partners with information and support on issues of sexual health through telephone help-lines, by email and post. They have national websites and fact sheets on different sexual problems in different languages and these can be sent to callers who request them free of charge.

ESDA has been holding an awareness campaign around St Valentine's Day since 2003 with the aim of drawing attention to the sexual health problems of many men and women in Europe. The event is supported by The European Society for Sexual Medicine (ESSM) and concludes on or around the 14th February in all participating countries simultaneously.

This year all countries participating at this alliance through their national centres, we want to stress the importance of consulting sexual problems with the health care provider as in many cases these difficulties can be the first sign of a serious underlying health condition which has gone undetected and undiagnosed.

Presenting Our European Data

Recent data from just some of the ESDA help lines shows just how common these problems really are. ESDA help lines in France, Greece, UK, Spain and Sweden received a total of 11.000 calls during last year. The largest number of calls was received in countries with the higher numbers of population of course. In France only, over 4500 people were seeking help as well as in UK with over 3000 phone calls.

Men or Women?

Men can hide. Perhaps that is the reason that throughout the continent, men were asking help from the national help-lines, no matter if they are living in Mediterranean or in the north of Europe. In France male callers represented 92, 6, in Sweden 71%, in Spain 93%, in Greece 88.5% and in the UK 75% of all calls were from men.

Has asking about sexual health to do with age?

The ages of the callers ranged from 16 to 87 years with an average age of 48 in the UK, 50 in France, 43 in Greece and 46 in Spain. The majority of callers were in stable relationships: 45% in Greece, 82% in France and 87% in Spain.

But what are Europeans doing for their sexual health?

Unfortunately, very few! Most interestingly the majority of callers to all national centers, both male and female had never consulted a health professional about their sexual problem: 75% of male callers in Sweden, 70% in Greece, 64% in France and 55% in Spain. In the case of women, still not a lot were trying to find a specialist to consult regarding sexual issues: 55% in Sweden, 60 in Greece, 64% in Spain, and 71% in France had never consulted their problem.

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**Coming to North America for the 1st time in 24 Years:
The 10th Quadrennial Congress of
The World Federation of Neuroscience Nurses
York University, Toronto, Canada, May 23-28, 2009**



■ The World Federation of Neuroscience Nurses (WFNN), in collaboration with the Neuroscience Nurses Foundation (NNF), the Canadian Association of Neuroscience Nurses (CANN) and York University invite you to join your friends and colleagues at the 10th Quadrennial Congress and Career Fair, Toronto May 23-28, 2009.

"Founded on Tradition - Focused on Tomorrow"

This is particularly surprising when you look at the amount of time they had had the problem. In France men had suffered a sexual dysfunction for 3 years on average before calling the helpline and women just over 3 years, whereas in Greece and Spain men had waited over 4 years and women in Spain almost 5 years before calling for help.

What do Europeans report regarding their sexual life to a help-line?

Regarding the type of sexual problem consulted ESDA data shows that in all countries men called primarily for erectile dysfunction (ED), 75% in France, 72% in Greece, 65% in Spain, 55%

in Sweden and 58% in the UK. But in the era of the drugs trying to help people with ED, still there is the problem with premature ejaculation: the second most consulted problem by men calling the help lines, with 19% in Greece, 25% UK, 12% in Spain and 10% in Sweden. What about women? Of all calls received in Greece, 11.5% were from women. In their case the most common problem was decreased sexual interest and desire: 30% in Sweden, 45% in Greece, 37% in France and 50% in the UK.

And as expected their second most common reported dysfunction was orgasmic dysfunction, 36% in Greece, about 11% in Sweden and France and 8% in Spain.

Sexual health: related to the overall health of men?

Some of the most interesting data emerges when one looks at concomitant diseases: In Greece approximately 20% of men had cardiovascular disease, followed by 11% diabetes and 3% prostate. In Spain nearly 31% of men had cardiovascular disease followed by 16% prostate problems and 15% diabetes mellitus. In the UK however 12% of male callers claimed they suffered from depression/anxiety and 10% had diabetes. Data from Sweden show that 6% of the men who called the helpline had cardiovascular disease, 6% had a concomitant psychiatric disease and 4% diabetes. In France 20% had cardiovascular problems, 12% had diabetes and as for prostate problems, 7.4%.

What about the underlying conditions reported by women calling the help-lines?

There were some important differences seen in different European countries. When presenting national data it was found that in Spain and Greece psychiatric/psychological problems were reported by 14% and 11% of women callers respectively. In Sweden the most common associated problems were gastrointestinal 8%, 6% osteoporosis and 4% cardiovascular disease. The most common medical problem reported by women in France was cardiovascular (17%) followed by psychiatric/psychological problems (25%), 13% lifestyle and 10% diabetes. ESDA provides sufferers, their partners and the general public with information about their problem and guides them on their way to finding a solution. We also offer support and reassurance. Men and women can call the helpline anonymously in their country and a telephone advisor will discuss the problem with them in a natural and relaxed manner and encourage them to consult their doctor. They can be sure they are not alone: prevalence studies show that, sexual health problems are very common, are often ignored leading to a negative impact on a person's quality of life, their personal relationships and their self-esteem. Additionally it is vital for the public to know that they are often the first sign of an important undiagnosed health problem such as diabetes, hypertension, depression and others.

A visit to the doctor to discuss the problem is crucial as the first step to getting the right assessment, tests, treatment and follow up. We would also like to stress that any medication purchased on the Internet without a proper guarantee and taken without medical supervision can be dangerous and should be avoided in the interests of safety.

Letter from Kate

Kate McArdle

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Glasgow Coma Scale Observations Service Review Cath Waterhouse

KEY WORDS -

Glasgow Coma Scale (GCS)

Head Injury

Outcome

ABSTRACT

Objectives: The Glasgow coma scale is routinely used to assess patients following head injury or other acute neurological events. The aims of this project was to assess and evaluate registered nurse's base line knowledge of the three behavioural responses that make up the assessment tool and establish how nurses perform the assessment in the clinical areas.

Methods: 60 questionnaires were used across six different clinical areas including Neurosurgery, Neuro Intensive Care, Neuromedicene, General medicine, Accident and Emergency and Intensive care. Observational studies compared nurse's performance, recording and documentation related to GCS Observations. National guidelines and for GCS observations and National Neuroscience benchmarking standards were used for comparison in the audit.

Results: .Several areas for improvement were identified particularly relating to application of painful stimulus, the use of sternal rubbing and nail bed compression continues to be common practice. Data collected suggested an overall lack of knowledge of the components that make up the GCS and the related physiology. Very few clinical areas document the separate components of the GCS as well as the final score.

Conclusions: The data demonstrated wide variation in GCS scoring across all specialties. The application of National guidance would help remove some of the anomalies and ensure a more consistent approach to assessment. Novel approaches to education are required to maintain knowledge and skills in this area of practice. Documentation needs to improve and include the results from component of the scale. Instruction on GCS recording, if taught in the first year of training, should be reviewed in more detail prior to qualifying. The findings from this study will provide a useful basis for future research using more precise methods.

In January 2007, the National benchmarking group working with the RCN Neuroscience forum and the British Association of Neuroscience Nurses undertook a project to explore practitioners practice and knowledge of the Glasgow coma Scale, (GCS).

BACKGROUND and PURPOSE

The GCS was introduced by Jennet and Teasdale in 1974, as a clinical scale for 'assessing the depth and duration of impaired consciousness and coma' and is routinely used for the assessment of patients with head injuries and other neurological problems. The early detection of subtle changes in the Glasgow Coma Assessment is vital to the treatment, management and ultimate prognosis of brain injured patients. There is a growing amount of evidence that suggests that there are problems encountered when completing some aspects of the assessment and the potential for performing an incorrect assessment is high in some clinical situations, e.g. in the intoxicated patient, intubated, paralysed or sedated patient.

This study will examine registered nurse's base line knowledge of the GCS and their perceptions of its use in practice. Observational studies will compare the performance of GCS Observations in a general ward

area, accident and emergency unit, general Intensive care as well as neuroscience areas. Finally, the project sought to determine when the GCS was taught either in clinical practice or in the universities, specifically, at what stage of training it was taught.

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METHODS

Information and data gathered through this work should assist in the development of guidelines to facilitate a more accurate and consistent use of the tool. Guidelines will, address some of the anomalies implicit within the recording of these observations and the development of guidelines and will help to clarify some of the misunderstandings the staff experience. Both qualitative and quantitative methods of data collection were used. Twenty questionnaires were distributed to universities across the country to establish the education and training provided to student nurses. A further 60 questionnaires that would utilise in-depth interviews combined with direct observations were designed for use in the clinical area. Groups and clinical specialties were invited to participate through their corresponding clinical educators or unit managers. The Neuroscience areas were all based within the Regional Neuroscience unit; the remaining three specialist areas were recruited from a large local hospital Trust and a District General Hospital.

The study was approved by the local ethics committee and all the information was entered on Access data base. Validity was established by basing the assessment tool on current literature and benchmarking standards based on best evidence, accepted best practice and consensus agreement, BANN, NNBG, 2007, Palmer and Knight, (2006), Brunner, 2006. Guidance published by Nice (2003, 2007), for the management of patient's with head injuries, stipulating the use of the Glasgow Coma Scale to assess all brain injured patients, have contributed to the theoretical base for the design of the questionnaire.

23 questions were selected representing the basic themes for the investigation. These areas included;

- Assessment of nurse's knowledge of the rationale for using the Glasgow Coma Scale.
- Identify nurse's knowledge and understanding of the underpinning physiology supporting the three behavioural responses of the GCS.
- Determining the use of painful stimuli by the nurse in the different sections of the GCS.
- Assessment of measures that maintain continuity and consistency of GCS recording and documentation.

The questionnaire was piloted with five volunteers from the Neurosurgical unit and it was also reviewed by members of the benchmarking group to see if there were any methodological issues to be addressed i.e. problems with the content, wording or difficulties in understanding the statement or completing the questionnaire. This led to the addition of a free text box at the end of each statement for people who wished to make further comments.

Associate partners in the project included:

Neurosurgery	Neuro Intensive care
Neuromedicene	General Intensive care
General Medical Ward	Accident and Emergency Department

RESULTS

Three quarters of the staff interviewed were staff nurses who had been qualified between two and six years. A small number (11%), were senior staff nurses with over ten years experience, over 70% of them working in the same clinical area since qualifying.

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• RATIONALE FOR USING THE GLASGOW COMA SCALE

The first part of the study asked questions related to the design of the scale, the category of patients that might require monitoring and the actual purpose of the tool. The following information was elicited from the responses in this section.

There was obviously some confusion about what participants believed constituted the Glasgow Coma Scale with 62% of nurses including pupil response and limb movement into the three established components of the tool. Meanwhile the remaining 38% identified eye opening, verbal response and motor response accurately.

It was only the nurses working within neuroscience that consistently identified the difference between the 14 and 15 point scale as abnormal flexion, although the majority of nurses vaguely recollected that it affected the motor section of the chart.

There was consensus of agreement that the GCS will be used to observe the following patients:

- Head injury
 - Conscious
 - Unconscious
 - Complaints of headache
 - Changes in behaviour

The clinical area and personal experience of the practitioners influenced the use of the GCS to assess patients such as: Stroke, facial injuries.

• KNOWLEDGE OF ANATOMY AND PHYSIOLOGY

The second aim of the project was to investigate the depth of nurses knowledge of the physiology related to the three subdivisions that comprise the tool. It is important that nurses understand that each sector corresponds to an area in the brain.

- Eye opening reflects the activity of the reticular activating system, extending from the brain stem into the thalamus and through to the cerebral cortex, described by Barker, 2002 and Hickey, 2003, as 'the degree to which a person is able to interact with their environment with a quality of vigilance'. Disruption of these pathways will cause a discernable change in level of consciousness and is reflected in the GCS.

- Verbal response determines the integrity of the higher, cognitive and interpretive centres of the brain responsible for speech, comprehension and articulation.
- Motor response assesses the function of the sensory and motor pathways and looks for the best response to a series of simple commands.

The findings from the study revealed that the majority of nursing staff had little insight into the related physiology and this percentage was consistent across all the different specialties and grades of staff. 12% of nurses answered the question correctly, over 28% of nurses stated that they had no idea of the area of brain involved, with the remaining 60% indicating the cerebral cortex for all three responses.

Nurses were asked where and when they were taught GCS observations. 70% of them stated that they received instruction during the first year of training at university. This corresponded with the results of the questionnaire posted to lecturers, although disappointingly there were only 8 respondents. At least 36% repeated this training on post-basic courses and 35% received education in the clinical area. Additional comments from respondents questioned the relevance of knowing the anatomy and reasoned that provided they recorded the response correctly, the additional knowledge didn't influence their performance of the assessment.

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• APPLICATION OF PAINFUL STIMULI

The next objective of the study was to determine whether nurses appreciated the importance of when, why and how to apply painful stimuli to assess eye opening. In the event that a patient fails to open their eyes to voice or to gentle stimulation, the practitioner must use a deeper painful stimulus. In the first section it is important for practitioners to use peripheral pain, standardised as pressure applied to the lateral outer aspect of the second or third finger for approximately 10-15 seconds. However, if the

patient is unable to move their limbs on command, central painful stimuli should be used, accepted as pressure applied over the supra-orbital nerve or to the spinal accessory nerve lying under the trapezium muscle thereby reducing the risk of eliciting a reflex action.

Data collection was particularly difficult and time consuming. It was my intention to observe all nurses assessing patients. Whilst there was little difficulty studying nurses working in neurosurgery or neuro intensive care where peripheral and central stimuli is used on a daily basis. In all the other areas, even Neurology, the need to apply pain is rarely indicated and I therefore had to rely on participants explaining to me the type of stimulus that they would have used.

100% of all nurses were able to list the types of painful stimuli that aren't recommended including nipple tweaking, sternal rub and pinching the skin around the arms. Despite this, 89% of the nurses working in neurosurgical areas applied pressure to the side of the finger, the remaining nurses used a combination of nail bed, sternal rubbing and pressure to the trigeminal nerve at the jaw margin. Interestingly, the nurses who had worked on the unit in excess of six years were more likely to use jaw margin compression than the junior nurses. In other clinical areas, 48% of nurses still routinely employed nail bed pressure despite it causing significant bruising and ongoing discomfort, the remaining nurses used sternal rubbing, trapezium pinch or stated that they would use supra-orbital ridge pressure.

An abnormal motor response to a central painful stimulus is one indication of severe brain injury, consequently it is important to apply pressure to an area of the body that minimises the potential for a spinal reflex. Nurses on NITU and GITU had little difficulty in using supra-orbital ridge pressure to elicit a response. However, practitioners in other areas expressed reluctance to use this pressure point, with 32% preferring to use the trapezium pinch or even the sternal rub, even though they recognised that it wasn't a recommended intervention. The data also revealed some confusion relating to understanding and recognising the difference between localisation, abnormal flexion and extension. 23% of respondents were unclear that they needed to record the highest level of movement that they observed from the responses.

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Verbal response assesses the patient's orientation to time, place and person. All nurses asked questions related to the patient's personal details and where the patient was (town, city or hospital), however, 9% of participants went on to ask the patient the date and day of the week, particularly if they had answered the year and month correctly.

- **ENSURING CONTINUITY AND CONSISTENCY OF GCS RECORDING.**

NICE guidance clearly states that a deterioration of 1 point in the motor response or an overall deterioration of 2 points in the GCS is of clinical significance and must be reported immediately. GCS observations must be recorded 1/2hrly until the GCS has returned to 15.

The frequency of recording of observations varied significantly across all six areas. In neurosurgery, GCS is often recorded as 14/15, particularly at night if the nurse needs to

stimulate the patient to rouse them from sleep, (relative to the patient's normal baseline), additionally, some local guidance states that medical staff must be contacted if the GCS drops by one point. Nurses working in A & E had little difficulty conforming with this guidance as their patients were acute admissions and clinically required continuous monitoring prior to transfer out of the unit. Conversely, a significant number of nurses on general ward areas, whilst recognising National and local guidance, commented that they had real practical difficulties maintaining 1/2hrly observations especially overnight, just because the patient needed 'waking up' from normal sleep and according to their local algorithm, must inform medical staff whenever there is a fall in GCS of 1 point. Finally nurses were observed and in some cases asked; whether they repeated the contents of the questions or performed a set of GCS observations during shift handover or when transferring care to other nurses or clinical areas. Only 28% of nurses stated that they did, however they all stated that it was not consistent across all patients, and usually focused on those patients that were causing most concern. Checking nursing records it was obvious that very few nurses documented the sum of the component parts of the GCS at the end of each shift, i.e. E4, V5, M6 to highlight differences or changes in the patient's neurological condition.

DISCUSSION

As this is the initial audit in relation to the performance of GC observations, it is vital to consider each objective and consider the implications for practice.

Rationale for performing GCS observations. – It was apparent from the review that all practitioners, regardless of specialty or experience, understand the indications for commencing a patient on GCS observations. Despite this, there is experiential and anecdotal evidence that some patient's neurological status isn't vigilantly monitored, particularly following relatively minor slips, trips or falls.

Knowledge of anatomy and physiology - It is apparent that few nurses appear to appreciate the mechanism which underpins the GCS assessment process, so whilst the practitioner is capable of ticking the right 'boxes' on the chart, I would argue that a basic knowledge of physiology might enable the practitioner to identify more subtle signs of altered levels of consciousness and understand the significance of their findings.

Application of painful stimuli - the data revealed considerable variation and discrepancies with the way painful stimulus was applied, the difference between central and peripheral stimulus and when it is clinically indicated to apply a deeper stimulus. On initial inspection it would seem that nurses have not integrated available knowledge into their clinical practice. However, this might not be surprising when you consider that the majority of medical staff uses the sternal rub as their primary assessment strategy. Confusion amongst nurses was particularly high when we discussed the rationale behind using a central versus a peripheral stimulus.

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Many nurses made the comment, "Well, you need to use a 'central' painful stimulus to assess motor response", what they meant in practice was, apply pain to the centre of the

body, rather than to the central nervous system – an easy assumption when you consider the practice of some medical staff when they use the sternal rub for stimulation. Unfortunately, in the clinical situation, we know that inadequate stimulation can lead to an inaccurate baseline from which to observe early and subtle changes of deterioration resulting in significant consequences for the patient. Conversely, painful stimulus should only be applied when the patient shows no response to voice or commands.

- **Ensuring continuity and consistency of GCS recording** - Vigilant observation and accurate recordings are essential for detecting changes in neurological function.

Ideally, the same person should perform the assessment over the shift to maintain continuity of observations. Conversely, due to high levels of clinical activity, it may be unrealistic to expect nurses giving and receiving handover, to perform GCS observations together on all the patients being monitored. However, it should be viewed as good practice (corresponding with the practice standards advocate by the benchmarking group), to state and record the score in terms of E4, V5, and M6, i.e. opens eyes spontaneously, offers orientated verbal response and obeys commands, to avoid any possible misunderstanding when interpreting the total score.

The unequivocal question here is why a scale that is so well established both nationally and internationally, that was designed to be straightforward and simple to be use, can cause so many uncertainties? Clearly the data did highlight some key issues that should be used as prompts to make a number of recommendations to promote consistent practice and minimise ambiguity.

- Further education on the use of GCS - may be formal or informal, supplemented by policies and guidelines.
- Clarification on the use of painful stimuli.
- Consistent use of GCS for all unconscious patients regardless of undying pathology.
- Dissemination of benchmarking standards across non-neuroscience specialties.

Laminated guidelines to be used along side the observations to enable easy reference

LIMITATIONS

The limitations of this study include the small sample size and variability between the methods of data collection, it wasn't always possible to conduct direct observations of nurses performing GCS observations as a consequence, a percentage of the data collected was self reported and therefore the findings may not be wholly accurate. Given more resources in terms of time and additional personnel data it would have been useful to collect data from a wider range of clinical areas or maybe to utilise clinical skills laboratories to simulate performance.

A similar study replicated throughout the U.K would also provide valuable data to inform

guidelines and improve patient care.

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C O M A S C A L E	Eye Opening	Spontaneously	4						
		To speech	3						
		To pain	2						
		None	1						

	Best Verbal Response	Orientated	5					
		Confused	4					
		Inappropriate words	3					
		Incomprehensible sounds	2					
		None	1					
	Best Motor Response	Obeys commands	6					
		Localises to pain	5					
		Flexes/withdraws to pain	4					
		Abnormal flexion	3					
		Extension	2					
		None	1					

INTRODUCTION TO THE EARLY MANAGEMENT OF SPINAL CORD INJURY BENCHMARK No 15

A benchmark is a level of quality, which can be used, as a standard Cambridge Dictionary (2007) and can be valuable for the standardisation of clinical practice. Or as Braine (2007) puts it simply, improving by learning from others. The aim of our benchmark was to assist in clinical decision-making about appropriate management not to be a substitute for professional judgement or individual accountability Wilson (1999). It was felt that there were inconsistencies in practice throughout the country when caring for acute spinal cord injured patients. Therefore the Scottish regional benchmarking group, consisting of senior nursing staff from Aberdeen Royal Infirmary, Ninewells Hospital Dundee, the Western General Edinburgh and the Southern General Hospital Glasgow were given the responsibility of compiling an evidence based benchmark to try and resolve this. When we looked at this it was felt that there were many areas to be covered i.e. bowel, bladder, transfer, log rolling, pressure area care etc therefore we broke this down and each performed literature searches for the subjects we were individually responsible for. Then collated the information and fed back to the group at the next meeting, as Braine (2007) suggests we varied the venue and met regularly, in our case every three or four months at each others place of work. We also communicated via E-mail, telephone and keep up to date with developments on the Yahoo group web site. The progress of Benchmarks, which are being worked on currently, is also fed back to the National group quarterly.

During our meetings we would share information, ideas and use this as an educational opportunity by analysing the evidence we sourced. We began to recognise there was a lack of information in some subject areas for example log rolling there was only one other unit in Scotland, England and Wales apart from the Western General Hospital in Edinburgh who had a log rolling protocol on paper at the time. Some other subject areas were controversial and remain open to interpretation of the literature such as the use of steroids, which we have suggested is used at the discretion of local policies or physicians. Utilising the benchmarking template this information all came together and was collated and presented at the national benchmarking meeting where it was well received and a few members suggested we publish it.

When this was fed back to us at the next meeting we felt flattered and excited that our hard work had been recognised, however since none of us have published before there was a great deal of apprehension. After much discussion we agreed that we would take up the challenge and go

ahead. It was then felt that because we were a group of 5 or 6 in order for the article to flow 1 or 2 of the group would do the writing and the rest would forward their research and work to them in order to collate and write the article.

The actual benchmarking process has been useful for us, it has allowed us to network with other neuroscience units in Scotland and readily share information, which will benefit not only our individual units but also the rest of the country. It has been valuable for our own personal and professional development and has opened the door to the possibility of publishing. Being involved in the benchmarking process has raised its profile in our own units and has increased interest in the process which has given us the opportunity to promote our hard work.

References

Braine M (2007) Neuroscience benchmarking: A process for sharing success and learning from experience Mar Vol 3 No 3 *British Journal of Neuroscience Nursing*

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■ Neuroscience Nursing Organisations

British Association of Neuroscience Nurses (BANN) -

<http://www.bann.org.uk>

The association aims to promote the highest standards of care within the speciality, encourages and give the opportunity for exchange of ideas in this country and abroad. It also aims to encourage interest and awareness of the special needs of neuromedical and neurosurgical patients. The association's journal Headlines is produced twice a year and is supplied free to members. The association runs an annual autumn conference.

European Association of Neuroscience Nurses (EANN) -

<http://www.eann.net/>

The European Association of Neuroscience Nurses (EANN) is an organisation that aims to promote high standards of neuroscience patient care and continuing professional neuroscience education through supporting

the exchange of information between neuroscience nurses across Europe. The association runs a Quadrennial Congress (conference), scheduled next for 2011 in Belgium.

The World Federation of Neuroscience Nurses (WFNN) -

<http://www.wfnn.nu/>

The World Federation of Neuroscience Nurses (WFNN) is an international neuroscience nursing organization dedicated to the promotion and development of neuroscience nursing throughout the world, involving 16 member organizations representing approximately 5,000 nurses from five continents. The federation issues a newsletter, International BrainWaves (IBW), three times each year. Scientific meetings are held every four years the 10th WFNN Congress to be held in Toronto May 2009.

Canadian Nurses Association - <http://www.cna-nurses.ca/>

The association sets standards of practice and promotes continuing professional education and research. Members collaborate with individuals, families, interdisciplinary teams and communities to prevent illness and to improve health outcomes for people with, or at risk for, neurological disorders. The Axon is the official publication of the CANN a peer-reviewed journal published quarterly. The next annual scientific meeting (conference) is to be held in Victoria, B.C. June 17 - 20, 2008.

American Association of Neuroscience Nurses - <http://www.aann.org/>

The association (AANN) is committed to the advancement of neuroscience nursing as a specialty through the development and support of nurses to promote excellence in patient care. The association issues its Official Newsletter of AANN, bimonthly Synapse The Journal of Neuroscience Nursing, published bimonthly, is the official journal of the AANN. The 40th Annual Meeting is scheduled for Nashville, Tennessee in March 2008.

Australasian Neuroscience Nurses Association - <http://www.anna.asn.au/>

ANNA shall be the development and advancement of neuroscience nursing, with membership across Australia, New Zealand and South East Asia. The Association publishes the bi-annual journal the Australian Journal of Neuroscience. The Association holds an Annual Scientific Program, generally held in conjunction with the Neurosurgical Society of Australasia.

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