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Contents

Editorial	2
When patients say “No one told me...” The development of Neurosurgical Patient Information Brochures Kylie Wright	3
Intracranial pressure measurement: a historical perspective Jennifer Blundell	8
Back to BASICS-Building A Stroke Inpatient Care Strategy: Key Performance Indicators in Stroke Nursing Karen Tuqiri, Sharon Eriksson	10
34th Australasian Neuroscience Nurses Association Annual Scientific Meeting: Poster Abstracts	14
Book Review: How to read pediatric ECGs Jason Birse	17
Recent Publications	18
Instructions for authors	20

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The Australasian Journal of Neuroscience
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 Australasian Neuroscience Nurses' Association,

Editorial

If you haven't submitted an abstract for the 2007 scientific meeting it is time to be thinking ahead to 2008. This edition of the journal includes abstracts from the 2006 meeting as well as two posters presented at scientific meetings of the association.

Additions to this edition include a book review, a summary of recent papers from journals and a historical perspective on intracranial pressure measurement.

Over the last few years there has been an increase in the number of education and conference days where research findings, case studies and other papers are being presented. However very few of these appear to be disseminated further through publication. This journal would like to assist in this, and is calling for submissions of research, papers, posters, case studies or educational articles/papers for review for publication.

Information for authors can be found on the back pages of this publication and further assistance is available by contacting the editor. A series of articles on turning posters, papers and other presentations into publishable articles will start in the next issue of the journal.

Jennifer Blundell

When patients say “No one told me...”

The development of Neurosurgical Patient Information Brochures

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ABSTRACT

A persistent cause for concern among hospital patients is that they often feel that they have not been given sufficient information about their condition. The desire for more information, lack of understanding and a memory of the message, and failure to provide it, all point to the need for provision of information in print.

The two aims of the project were to improve communication between health care professionals and neurosurgical patients, as well as the improvement of information resources through the development of patient information brochures. The Delphi consensus model was used to identify educational needs of patients and suitable topics for brochure development in consultation with patients and health care professionals regarding appropriate content. Principles of preparing and writing well-designed patient materials were also reviewed to enhance the probability that the patient information brochures would be readable and understood.

Subsequently, a set of neurosurgical patient information brochures was developed incorporating extensive multi-disciplinary consultation. These were introduced throughout the neurosurgical service leading to improved communication and positive patient experiences.

Key Words:

Neurosurgical; Patient information brochures; Communication

Background

Current trends in health care concentrate upon involving the patient in their health care decisions. A persistent cause for concern among hospital patients is that they are left feeling uncertain about verbal information provided to them, and that they have been given insufficient information about their condition.

Research shows that when patients are anxious, information interpretation is impaired. It has been reported that within five minutes of leaving a consultation patients may forget up to 50% of what their doctor or nurse has said about their condition and treatment (Kitching,1990). In addition, anxious patients are less likely to be able to express their concerns clearly, and their questions go unrecognised by busy clinicians (Weijts, Widderstouen, Kok, & Tonlow,1993).

So why provide patient information brochures?

The desire for more information, failure to provide adequate information, lack of understanding and forgetting the information presented verbally, all point to the need for provision of information in print (Kitching,1990).

Research into information provision has shown that written materials are effective channels for communicating health messages (Allensworth & Luther, 1986; Frank-Stromborg & Cohen, 1991). Patient information booklets can be utilised in conjunction with verbal advice, as part of a consultation (Bauman, 1997) in a pre-admission clinic, intensive care unit, emergency department, or ward setting.

Computerisation has enhanced the ability to deliver inexpensive, up-to-date, quality patient information. A leaflet can be accessed quickly, customised, personalised, printed,

and given to patients as part of a consultation (Kenny, Wilson, & Purves, 1998).

At the Liverpool Hospital Neurosurgical Unit, the need for adequate patient information material was recognised and hence a multi-disciplinary working party was established to develop neurosurgical patient information brochures that met the demands of the current patient population.

Aim

The aim of this project was to improve communication and information dissemination between health care professionals and neurosurgical patients and their family members. To achieve this goal it was decided to develop easy-to-read, informative, quality printed patient information brochures.

Methods

“Brainstorming” was used involving key members of the neurosurgical multi-disciplinary team, to look at the educational needs of neurosurgical patients. Using the Delphi consensus technique (Dick, 2000), the group identified fourteen topics as a starting point. Topics that were less common or required complex explanations were deemed unsuitable for inclusion.

The criteria utilised when developing the brochures included:-

- Information that was relevant to the patient, as well as provision of answers to commonly asked questions (obtained from patient / carer focus groups).
- Provision of accurate, easy to follow clinical details consistent with hospital policies / procedures and published research.

An extensive search of published literature was undertaken and key aspects of neurosurgical clinical policies and procedures were extracted for inclusion in the brochures.

A sample (n= 20) of neurosurgical patients and their family members were interviewed to obtain their input. These volunteers were asked what information they would like to receive in the form of a patient information brochure. Additionally, this group was asked if there was any

information that they had not been told initially but thought would be useful for other patients to know. This information was included in the content of the brochures.

How should patient information be written?

Published guidelines for the preparation of the patient information brochures were taken into consideration to ensure that the material would be effectively designed to be read and understood.

Factors taken into account were:

- Content written at an appropriate reading age (Bennet & Bridger, 1992; Estey,1991;Kitching,1990; Mumford, 1997; North, Margree, & Roe, 1996).
- A good standard of print legibility (North,et al.,1996).
- Text to be mixed type – capital and lower case letters (Mumford, 1997).
- Contrast between printing ink and paper colour (North,et al.,1996).
- Use of non-gloss paper (North,et al.,1996).
- Information to be spaced out with use of white space (North,et al.,1996).
- Text to be written in the second person (Coppel & Stoker, 1993).
- Simple illustrations to support the text

Draft patient information brochures were developed and widely disseminated throughout neurosurgical, intensive care and peri-operative health care personnel. These staff were invited to provide feedback or additional information to the brochures.

A sample of patients as well as non-healthcare volunteers (n = 30) were asked to read the booklets and circle any words, sections or paragraphs that they did not understand. This identified text was then re-written to ensure the use of short simplistic sentences, avoiding the use of technical and medical terms, where possible. Where a medical term was used a simpler word was added in brackets after the term. Additionally, the volunteers were asked to identify any questions they felt were unanswered by the draft brochures.

The feedback received led to:

- Changing the draft booklets into an A4 three-fold format
- Modifying and simplifying wording

- Inclusion of more comprehensive lists of risks associated with procedures / operations.
- Use of more bullet points
- Provision of explanations about possible theatre delays and cancellations
- Inclusion of a contact number that patients and/or family members could ring should they have any concerns.

Results

The topics chosen for the first set of Neurosurgical Patient Education Brochures included:-

- Before your surgery (neck/back & brain surgery).
- After your surgery (neck/back & brain surgery).
- The brain and spine CT scan.
- Cerebral angiogram Test.
- Lumbar puncture.
- Stereotactic brain biopsy.
- Craniotomy.
- Neck / back surgery
- Hydrocephalus and shunts.
- External ventricular drains.
- Neurological assessment.
- Cerebral aneurysms.
- Philadelphia collar. At home instructions.
- Care of surgical wounds at home.

The patient information brochures were produced using the microsoft publisher ® program. A blanket format was used throughout the set of brochures and the same colour scheme was utilised for all fourteen brochures creating an identifiable set/series. The brochures contain simple illustrations to complement the text and enhance the visual quality of the written material. An 'Arial' font was used as an identified 'easy-to-read' text type and the content was written in conversational style, as if someone were talking to the patient.

The development of fourteen neurosurgical patient information brochures took nine months to complete and included extensive multi-disciplinary consultation. The implementation of the booklets throughout the Liverpool Health Service took a further two months. (Fig 1).

Since the development of these fourteen original brochures the same process has been successfully repeated resulting in the development of a further six brochures taking the Neurosurgical Patient Information Brochure set to a total of twenty. The later brochure titles include:

- Aspen Collar. At Home Instructions.
- Back Care Guidelines
- Dexamethasone
- Dilantin (Phenytoin)
- Neuro-Oncology Services
- Cognitive Problems following Neurological illness

The information brochures are currently printed in-house on an 'as needed' basis as well as being generally displayed and available in the Liverpool Hospital neurosurgical unit, the neurosurgeons consultative rooms, the trauma ward, neurology/stroke ward, brain injury rehabilitation unit and intensive care unit. In addition, the admissions department and pre-admission clinic utilise certain booklets when patients access the hospital.

Conclusion

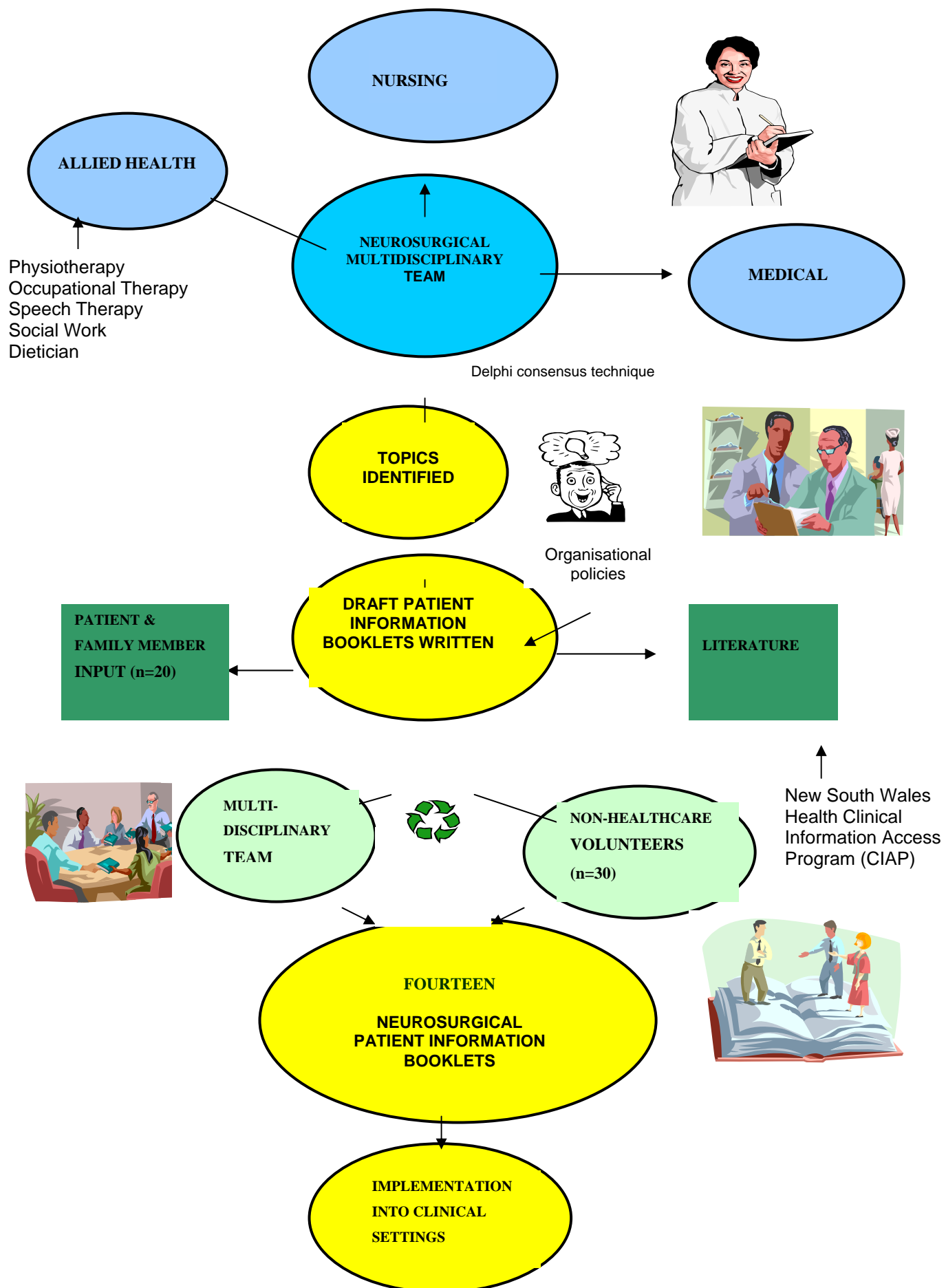
Capturing the information that patients and their family members wanted, in a brochure that was user friendly and in line with principles of good written communication, was challenging. This challenge was met successfully with the development and introduction of a set of easy-to-read, quality printed patient information brochures that have provided a means of improving communication and information dissemination between health care professionals and neurosurgical patients and their carers.

The content included in the brochures was chosen cautiously, and many factors were considered to enhance an effective brochure design. The neurosurgical patient information brochures are taken and read by patients and carers, from the display areas at a steady rate. Frequent re-stocking of booklets is required. As well as patient use, medical and nursing students are utilising the brochures and find them useful and educational resources for their own purposes.

The Future of Neurosurgical Patient Information Brochures at Liverpool Health Service.

The usefulness of these brochures in improving patient communication and information dissemination has been

Fig. 1 Diagrammatic representation of processes taken to develop Neurosurgical Patient Education Brochures.



evaluated positively by patients, their family members and health professionals.

Future plans include regular revision of the brochures, development of more patient education brochures addressing further topics, and translation of the brochures into foreign languages.

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Intracranial pressure measurement: a historical perspective

Jennifer Blundell RN PhD

While the effect of a rise in intracranial pressure (ICP) has been known for many years early neuroscience nursing textbooks describe the way to monitor for a rise in pressure by assessment of pulse and blood pressure, and signs such as headache, vomiting, choked disc (papilloedema), and 'stupor'. Other signs associated with a rise in intracranial pressure noted were: "vertigo and dizziness; unilateral sixth nerve paralysis; yawning and sighing; mental dullness and deterioration; convulsions; stupor and mental clouding leading to coma and death" (Klemme, 1949,pp11-12).

Medical management included the use of hypertonic intravenous fluids, oral, rectal or intramuscular Magnesium sulphate, caffeine, limited fluid intake, and reduction of pressure through a 'spinal tap' and removal of cerebrospinal fluid (Klemme 1949,p45; de Gutiérrez-Mahoney & Carini,1956,p161).

During the late 1960s and 1970s there were a number of publications describing advances in the mechanics of measuring intracranial pressure (Atkinson, Shurtleff & Foltz, 1967;Jacobson & Rothballer, 1967; Symon & Dorsch 1975; Meyer, Lyon, Bustard, 1975; Yoneda, Matsuda, Handa, Handa, 1975;Verdura, Resnikoff, Orozoco, 1976; Zervas, Cosman, Cosman, 1977).

Lundberg (1960) is credited with introducing ICP monitoring using ventricular cannulation into practice, rather than as a research tool only (Walleck 1987). Although ICP monitoring was used in experimental conditions, prior to the advent of fibre optic ventricular catheters and transducers in the 1970s only an estimation of intracranial pressure (ICP) could be made. This was done by measuring cerebrospinal fluid (CSF) pressure or external ventriculostomy drainage. In the latter method the indicator for raised ICP was drainage of ventricular CSF and measurement of the level of cerebrospinal fluid in the bottle. However this method was not able to provide specific information about the rise or trends in ICP (Mitchell, Mauss, Lipe, Ozuna1980).

Early ventricular drainage systems were made from sterilised empty glass intravenous fluid bottles, rubber bungs, tubing and clamps and ventricular catheters. Later manufactured closed system sets, the forerunner to the sets of today, became available. Patients were positioned supine with the head of their bed elevated 30 degrees. The inverted bottle was positioned in line with the foramen of Munro, this being accomplished using a spirit level. In some places the bottle was suspended from the bed head by a cradle made from a bandage that was tied to the crosspiece of an IV stand.

As well as taking great care to maintain asepsis the nurse also had to ensure the safety of the apparatus. Potential risks to avoid included breakage of the drainage bottle, disconnection of the tubing and lowering of the bottle, all of which would lead to loss of CSF as well as a potential source of ascending infection. The author vividly remembers nursing a patient with ventriculitis and green tinged CSF due to infection.

Much of the early research into the effect of nursing interventions and patient activity, especially positioning, on intracranial pressure) was carried out using an external ventricular drainage system. (Mitchell & Mauss, 1978), or an open manometer within the system (Mitchell, et.al. 1980). An increase in CSF drainage was seen as indicative of a rise in ICP. Other studies used cardiovascular measurements such as heart rate, arterial pressure, pulmonary wedge pressure, central venous pressure, cerebral perfusion pressure and cerebral blood flow in conjunction with EVD drainage.

Later these earlier studies were replicated using subarachnoid screws or bolts, extradural sensors and bedside ICP monitoring systems (Parsons & Ouzts Shogan, 1984; Boortz-Marx 1985, Jones, 1995).

1979 saw recommendations for adoption of the Glasgow Observation Chart (GCS) as the standard assessment chart in Australia, this also corresponded

with the move of Computerised Tomographic (CT) scanning into the mainstream as a diagnostic tool (Petty (1979) in Dinning & Connelley, 1981).

The advent of transducers meant that the monitoring system was closed and was more accurate than the previous 'open' system and allowed a continuous digital record to be displayed on the monitor.

However early technology could be cumbersome and measurement of the wave form was documented through a trace on paper, similar to the method of recording ECG tracings (Figure 1). Nurses documented their patient interactions directly onto the trace record.

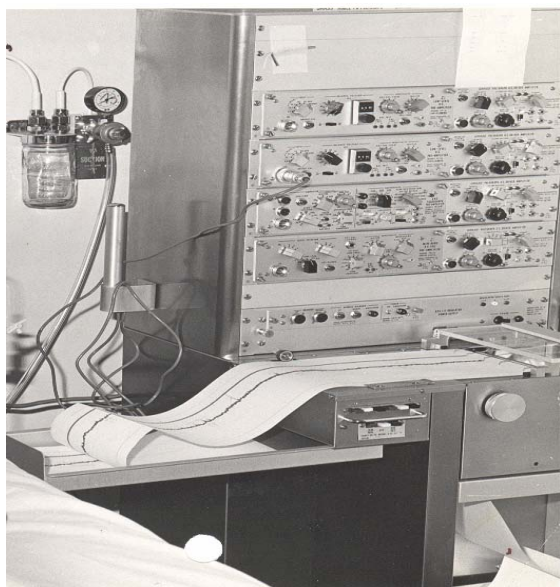


Figure 1: The 'polygraph' circa 1974

By the 1980s neurosurgical nursing texts were including discussion of ICP monitoring in addition to dehydration regimes and ventricular drainage (Conway-Rutkowski 1982). However it is noted that "well trained nursing staff" are required, as well as the need to include measurements such as ECG, EEG and arterial pressure in conjunction with ICP measurements.

Today monitoring of ICP, in conjunction with cardiovascular and cerebrovascular measurement, is commonplace in acute neurosurgical units.

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Back to BASICS

Building A Stroke Inpatient Care Strategy

Key Performance Indicators in Stroke Nursing



Karen Tuqiri, Sharon Eriksson
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Introduction

Monitoring the standard of health care delivered to patients is essential in the current quality focused health care system. The need for objective key performance indicator (KPI) data collection is evident as health care environments focus on improved quality of care and greater accountability. More recently the quality of nursing care received by patients and its impact on patient outcomes has received great attention. The development of KPIs sensitive to patients nursing needs is of great importance in this indicator-oriented health care system.

Following a review of the literature it became evident there was a lack of documented KPIs specific to stroke nursing. To monitor and review the standard of nursing care in the Prince of Wales Hospital Acute Stroke Unit (POWH ASU), the need for a quality improvement strategy that addressed some of the fundamental elements of stroke nursing was identified. Hence the BASICS process was established.

Aim

The introduction of stroke nursing KPIs aims to optimise the standard of nursing care delivered to ensure the best possible patient outcomes are achieved. This occurs through the monitoring and review of stroke nursing care delivery. The entire process promotes the continuation of existing good nursing practice and allows the identification of specific areas in practice requiring improvement.

Method

The BASICS process involved:

- Establishment of a BASICS working-group, which consisted of senior stroke nurses.
- Identification of **5 core skills** that were pivotal to the stroke nursing specialty. These were;
 - Nasogastric tube management
 - Glasgow Coma Score (GCS) assessment
 - Fluid status monitoring
 - Pressure area care
 - Indwelling urinary catheter management
- Recognition of auditing as the most relevant method to monitor and measure nursing performance in these areas.
- Development of 5 audit tools which would be utilised to survey the most fundamental aspects of each of the core skills. An example of the Nasogastric/PEG management audit tool is illustrated in figure 1.
- Encouragement of all nurses working in the ASU to participate in the auditing process. This was to promote a sense of ownership by the nurses in the auditing process and to provide an opportunity for them to observe their current standard of care delivery.
- Collation of audit results and completion of a report by the Stroke Clinical Nurse Consultant.

- Timely distribution and feedback of the audit results to nursing staff. Feedback is provided during the monthly ward meeting and through the use of a communication book, where the audit report is made available to all staff.
- Regular auditing to occur every four months to ensure ongoing review of care delivery and the monitoring of trends.

NASOGASTRIC/PEG TUBE MANAGEMENT AUDIT

DATE: _____

AUDIT CONDUCTED BY: _____

To answer the following survey questions, information will need to be obtained from a total of 10 patients who were admitted to the Stroke Unit with a nasogastric (NGT) or percutaneous endoscopic gastrostomy (PEG) tube.

Place a mark in the yes, no or N/A boxes for each response (overall should total 10).

QUESTION	YES	NO	N/A	COMMENT
1. Was the NGT/PEG documented in the patient's notes?				
2. Was the tube and size of the NGT/PEG entered in the patient's notes?				
3. Was it recommended that tube position was confirmed prior to commencing feeds?				N/A for PEG
4. Was the tube checked regularly to ensure it was in position?				N/A for PEG
5. Did the presence of reflux or regurgitation occur?				N/A for PEG
6. Did the patient's receiving feeds in a semi-recumbent position?				
7. Were the feeding tests been changed as per and protocol?				
8. Was the formula used?				
9. Was the equipment for NGT/PEG used correctly?				
10. Was the patient's nursing care at the bedside?				
11. Has the NGT/PEG management been documented each shift to the patient's notes (including confirmation of tube position each shift with air leak test)?				

PLEASE RETURN COMPLETED AUDIT TOOL TO THE NUM or CNC.

Figure 1: Example of NGT/PEG tube management audit tool

Figure 2: Example of audit results report

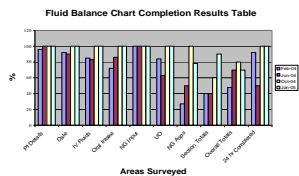
FLUID BALANCE CHART DOCUMENTATION AUDIT RESULTS

Acute Stroke Unit - POWH
January 2005

A total of 10 randomly selected fluid balance charts were audited in the Acute Stroke Unit at POWH. The results of the audit, including analysis and recommendations for improved practice follow. Attached is the completed audit tool.

A Stroke Clinical Nurse Specialist conducted the audit on the 24th January 2005. The results of the survey are outlined below:

AREAS SURVEYED	N ^o RELEVANT	RESULT	
		COMPLETED	NOT COMPLETED
1. Was the patient's identifying details on the FBC?	10	100%	0%
2. Was the date on the FBC?	10	100%	0%
3. Was the intravenous fluid section fully completed for the 24 hours?	6	100%	0%
4. Was the oral intake section fully completed for the 24 hours?	2	100%	0%
5. Was the nasogastric/heads intake section fully completed for the 24 hours?	9	100%	0%
6. Was the urine output section fully completed for the 24 hours?	10	100%	0%
7. If nasogastric tube feeds, were the appropriate recorded for the 24 hours?	9	78%	22%
8. Was the total balance for each moderately recorded?	10	90%	10%
9. Was the total 24-hour balance for input and output recorded?	10	70%	30%
10. Were the balances transcribed onto the 24-hour fluid summary chart?	10	100%	0%



ANALYSIS & COMMENTS

The results of the survey demonstrated a 100% completion rating on fluid balance chart documentation for 7 of the 10 areas surveyed (1, 2, 3, 4, 5, 6 & 10). Area 7 had a 78% completion rating. Area 8 had a 90% completion rating. Area 9 achieved a rating of 70%.

This audit was conducted to highlight our performance in fluid balance documentation, which is an essential part of nursing care. Since the last audit in October 2004 there has been continued good practice demonstrated in several of the Areas surveyed. There were two Areas that the level of completion declined (7 & 9). There has been a 30% improvement in Area 8.

The auditor made note that overall the FBC's surveyed appeared generally clear and accurate. Although charts appeared to become less detailed on the afternoon shifts. The auditor commented that the night duty staff sometimes omitted the totals sections on the FBC, proceeding straight to the 24-hour summary chart.

Please review these results and aim to improve our fluid balance chart documentation standard for Areas 7, 8 and 9.

RECOMMENDATIONS

- Results of the audit will be presented at the next ward meeting and a copy of the results placed in the memo folder. Staff will be given the opportunity to recommend strategies for improved practice.
- Education regarding correct documentation of fluid balance charts and its importance will be included in the units in-service education program and on a need basis.
- A repeat review will be undertaken in May 2005.

Conclusion

The BASICS process has allowed for the development of KPIs that highlight those factors that are characteristic of high quality stroke nursing care. It has become evident that KPIs should be established to link the relationship between processes of care and outcomes of care. The involvement of clinical staff, timely feedback of audit results and ensuring the continuation of regular auditing are key components essential for the successes of this project. Importantly nursing staff have recognised the impact their nursing practice has on patient outcomes and are demonstrating greater accountability for their care delivery.

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See following pages for figures and tables

Figure 1: Example of NGT/PEG tube management audit tool

NASOGASTRIC/PEG TUBE MANAGEMENT AUDIT

DATE: _____

AUDIT CONDUCTED BY: _____

To answer the following survey questions, information will need to be obtained from a total of 10 patients who were admitted to the Stroke Unit with a nasogastric (NGT) or percutaneous endoscopic gastrostomy (PEG) tube.

Place a mark in the yes, no or N/A boxes for each response (overall should total 10).

QUESTION	YES	NO	N/A	COMMENT
1. Was the insertion of the NGT/PEG documented in the chart and/or notes?				
2. Was the type and size of the NGT/PEG inserted documented?				
3. Was it documented that tube position was confirmed prior to commencing input?				N/A for PEG
4. Is the NGT taped securely to the patients nose?				N/A for PEG
5. Is there evidence of nares pressure areas?				N/A for PEG
6. Is the patient receiving feeds in a semi fowlers position. e.g. >45°?				
7. Have the feeding sets been changed as per unit protocol?				
8. Is the correct formula and rate being administered?				
9. Is the equipment for NGT/PEG and mouth care at the bedside?				
10. Are syringes being used for NGT/PEG clean?				
11. Has the NGT/PEG management been documented each shift in the patients notes (including confirmation of tube position each shift with air test +/- litmus)?				

PLEASE RETURN COMPLETED AUDIT TOOL TO THE NUM or CNC.

Figure 2: Example of audit result report

FLUID BALANCE CHART DOCUMENTATION AUDIT RESULTS
Acute Stroke Unit - POWH

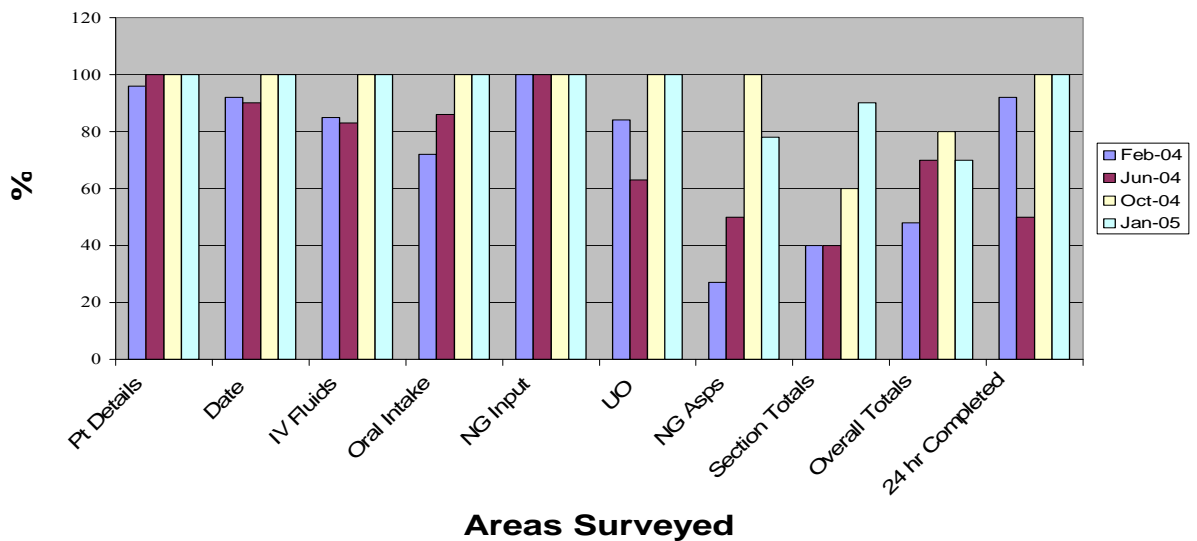
January 2005

A total of 10 randomly selected fluid balance charts were audited in the Acute Stroke Unit at POWH. The results of the audit, including analysis and recommendations for improved practice follow. Attached is the completed audit tool.

A Stroke Clinical Nurse Specialist conducted the audit on the 24th January 2005. The results of the survey are outlined below.

AREAS SURVEYED	N ^o RELEVANT	RESULT	
		COMPLETED	NOT COMPLETED
1. Was the patient's identifying details on the FBC?	10	100%	0%
2. Was the date on the FBC?	10	100%	0%
3. Was the intravenous fluid section fully completed for the 24 hours?	6	100%	0%
4. Was the oral intake section fully completed for the 24 hours?	2	100%	0%
5. Was the nasogastric feeds intake section fully completed for the 24 hours?	9	100%	0%
6. Was the urine output section fully completed for the 24 hours?	10	100%	0%
7. If nasogastric tube insitu, were the aspirates recorded for the 24 hours?	9	78%	22%
8. Was the total balance for each modality recorded?	10	90%	10%
9. Was the total 24-hour balance for input and output recorded?	10	70%	30%
10. Were the balances transcribed onto the 24-hour fluid summary chart?	10	100%	0%

Fluid Balance Chart Completion Results Table



ANALYSIS & COMMENTS

The results of the survey demonstrated a 100% completion rating on fluid balance chart documentation for 7 of the 10 areas surveyed (1, 2, 3, 4, 5, 6 & 10). Area 7 had a 78% completion rating. Area 8 had a 90% completion rating. Area 9 achieved a rating of 70%.

This audit was conducted to highlight our performance in fluid balance documentation, which is an essential part of nursing care. Since the last audit in October 2004 there has been continued good practice demonstrated in several of the Areas surveyed. There were two Areas that the level of completion declined (7 & 9). There has been a 30% improvement in Area 8.

The auditor made note that overall the FBC's surveyed appeared generally clear and accurate. Although charts appeared to become less detailed on the afternoon shifts. The auditor commented that the night duty staff sometimes omitted the totals sections on the FBC, proceeding straight to the 24-hour summary chart.

Please review these results and aim to improve our fluid balance chart documentation standard for Areas 7, 8 and 9.

RECOMMENDATIONS

1. Results of the audit will be presented at the next ward meeting and a copy of the results placed in the memo folder. Staff will be given the opportunity to recommend strategies for improved practice.
2. Education regarding correct documentation of fluid balance charts and its importance will be included in the units in-service education program and on a need basis.
3. A repeat review will be undertaken in May 2005.

Abstracts from the 2006 Scientific Meeting

The poster abstracts for the 2006 Scientific Meeting are presented below. They provide you with a snapshot of the research and practice that neuroscience nurses are engaged in, as well as case study presentations.

Rendu-Osler-Weber Syndrome

Kate Becker & Rochelle Firth

Objectives:

- Describe the natural history and pathophysiology of Rendu- Osler- Weber Syndrome.
- Discuss two case presentations 3. Identify the multidisciplinary management of this patient population

Abstract:

Rendu-Osler-Weber Syndrome is a rare syndrome. It is caused by a dominant autosomal gene. It usually characterised with both neurological and non-neurological manifestations.

We're all in this together - P.T.A. in the Operating Room

Terri Pinkis

Objectives:

- To explain the importance of the Time Out procedure in ensuring the safe passage of the patient through his surgical experience.
- To demonstrate why Time Out needs to include ALL team members.
- To relate the steps in the Time Out procedure to the ANNA Professional Standards for Neuroscience Nurses.

Abstract:

The history of surgery tended to depict the Surgeon as "the master of the domain" of the Operating Theatre, and everyone else there, including the patient, as his "assistants". Today, "one man shows" are a thing of the past and TEAMWORK is the new standard. Jargon exists in all types of occupation and different acronyms mean different things to different people. PTA to the American education system is the Parents and Teachers Association; a vascular OR nurse will think Percutaneous Transluminal Angioplasty, and a neuroscience nurse will assume PTA refers to Post Traumatic

Amnesia or Agitation. As a peri-operative nurse first, and a neuroscience nurse second, I like to think PTA stands for Peri-operative Team Approach. My poster seeks to establish the relevance of this PTA and specifically to explain the NSW Department of Health policy on Correct Patient, Correct Procedure, and Correct Site including the Time Out procedure.

Stroke a Community Forum

*Alison Wilson, Robin Grenenger, Kareene Doyle, Kate Schuj, Paul Ticali, & Michelle Dettrick

Abstract:

Background: As a community health promotional activity, Stroke Clinicians from SSWAHS coordinated an annual Stroke Community Forum. This originated from an identified lack of stroke specific support post discharge in SSWAHS and the overwhelmingly positive response to the inaugural forum. Social support has been shown to influence outcomes post stroke. Support during adjustment to life after stroke would seem particularly important. The target audience was Stroke Survivors and Carers.

Aims: Increase awareness of Stroke Increase awareness of risk factors and treatments Promote well being and life quality after Stroke Increase links between acute care, community resources and consumers Facilitate peer support.

Method: The Clinical Guidelines for Stroke Rehabilitation and Recovery 2005 recommended that while there are currently no studies regarding the effectiveness of peer support for stroke survivors and carers it is an important aspect of living with a stroke. Health professionals in the acute and community sector from SSWAHS in liaison with the Stroke Recovery Association planned and evaluated the effectiveness of a Stroke Community Forum. Sponsorship enabled attendee's free registration and access to information, resources and equipment that they would not otherwise have been exposed to. 65 Registrants attended the 2004 event and of the 42 Evaluation forms returned, the presenters rated highly and comments were overwhelmingly positive.

Discussion: The opportunity for informational support and peer group contact post stroke is beneficial to stroke survivors and carers as evidenced by the forum evaluation.

What is Microvascular Decompression? Information for staff, patients and their families.

Pilar Munoz

Abstract:

Microvascular Decompression (MVD) has become an accepted surgical technique for the treatment of trigeminal neuralgia, hemifacial spasm, glossopharyngeal neuralgia and other cranial nerve rhizopathies. Trigeminal Neuralgia (TN) or tic douloureux is characterised by severe, lancinating pain lasting seconds to minutes in the distribution of one or more of the sensory divisions, most often the mandibular and/or maxillary division. Evidence is increasing that in most patients, trigeminal neuralgia is caused by compression of the trigeminal nerve root by an aberrant arterial or venous loop close to the entry into the pons. The first line of therapy is medical and consists of the use of anticonvulsants such as carbamazepine. Other drugs, including lamotrigine, phenytoin, gabapentin, baclofen, topiramate and clonazepam have some effect, although studies on their efficacy are limited. Surgical intervention is reserved for those who are unable to tolerate the side effects of these medications or for whom these medications are no longer effective. Where medical treatment of TN has failed there are effective surgical treatments. MVD is a more extensive, elective surgical approach that offers relief of TN whilst maintaining normal facial function.

Animal-Assisted Activities (AAA)

Amanda Ormerod

Objectives:

- Raise awareness and educate others in the Neuroscience field of Nursing in regards to the positive benefits of animal activities and visits in both hospital and rehabilitation settings.

Abstract:

The Neuroscience Unit (Ward 2C) at the Princess Alexandra Hospital, Brisbane QLD, is a 36 bed Neurosurgery/Neurology/ Acute Stroke Unit caring for people with cognitive and physical impairments; communication difficulties; and varying behavioural, emotional and physical needs. Since April 2006 our unit has been fortunate enough to participate in Animal-Assisted Activities (AAA) - with regular fortnightly visits from a 'Delta Society Dog', and their 'Pet Partner' volunteer handler/s. Animal-Assisted visits are casual "meet and greet"

activities which involves pets visiting patients in hospitals. Specially trained animals provide selected patients with opportunities for recreational, emotional, motivational and/or social benefits. It is well documented that positive association with animals can improve human health by providing motivation, companionship, comfort and pleasure; stimulate awareness and interaction; and by reducing stress, anxiety, depression, and loneliness (1). Pets serve us in many ways - as companions and for therapy. The therapeutic use of animals can become a valuable adjunct to reaching treatment goals in Neuroscience patients. It is something that every one of varying ages and levels of functioning continues to enjoy and participate in. Nursing staff have also observed a more relaxed atmosphere within the unit when the 'Delta Society Dog' and handler come to visit. Reference: 1. Hermanns-Stanley, M. & Miller, J. (2002) 'Animal-Assisted Therapy: Domestic animals aren't merely pets. To some, they can be healers', *American Journal of Nursing*, Vol. 102, No. 10, pp69-76

STROKE CARE PATHWAYS: A Mechanism for Driving Nursing Clinical Practice Improvement Projects

Karen Tuqiri and Sharon Eriksson

Abstract:

BACKGROUND: In 2003 the Towards a Safer Culture (TASC) project was commenced at the Prince of Wales Hospital (POWH). The aim of the project was to provide a safer culture in hospitals departments by introducing evidenced based clinical pathways for the management of acute stroke. The pathway focuses on the early management of the stroke patient, predominantly in the Emergency Department (ED). The minimum data set captured from the pathway allows outcomes of care to be evaluated up until patient discharge. The data enables us to identify areas requiring clinical practice improvement (CPI). To date the POWH Acute Stroke Unit has undertaken three projects based on the results from the data reports. This poster will illustrate how pathways can be used as a mechanism to drive nursing CPI projects.

AIM: To demonstrate how the use of care pathways for acute stroke patients facilitates the development of nursing CPI projects.

METHOD: Through the reviewing of data outcome trends, areas requiring improvement were identified. These included:

Less than optimal number of stroke patients being admitted directly to the Acute Stroke Unit (ASU).

Increased rate of urinary tract infection (UTI).

Decreased occurrence of swallow screening of patients within the first 24 hours after admission.

It was then identified how specific stroke nursing CPI strategies could potentially improve these outcomes. These included:

The development of an Acute Stroke Unit Bed Management Policy, and improved awareness of staff involved in bed management.

Introduction of an infection control type of indwelling catheter (IDC) and improved staff awareness of the necessity for early IDC removal.

Introduction of nurse initiated swallow screening on the ASU.

RESULTS: After the introduction of the nursing CPI projects data now available has shown there has been an improvement in two of the three outcomes. The number of patients admitted directly to the ASU has increased by at least 10% and UTI incidence rates have decreased to below 5%. The nurse initiated swallow screening is the most recent strategy to be implemented and as this project is in its early stages results are not yet available.

CONCLUSION: The use of clinical pathways remains poorly supported in the literature. However it has been demonstrated in our experience that they have the potential to identify areas that require improved nursing practice. The data reports that are generated from the pathways provide the ability to monitor the effect of CPI projects on patient outcomes.

"Patient Stories"

Margherita Murgo; Zaklina Stojceski; Karen Woods*

Abstract:

Practice Development Through Patient Stories: Achieving practice development through patient stories is an important approach to improving patient care. Patient stories and family narratives are being utilised in a variety of neuroscience settings as a means to understand and reflect upon patient experiences. A project conducted through a Hospital development program aimed to achieve practice development via interviewing patients from different wards. After institutional ethics approval and informed consent, a convenience sample of 5 patients, from neurosurgery (2), plastic surgery (2) and the orthopaedic wards (1) were interviewed using a discovery interview (DI) process. DI is a non-directive interview to elicit patient experience of their hospital stay. DI's allow patients to concentrate on telling their stories, providing information that is directly from personal experiences. Interviews were undertaken at a convenient time for the patient with 2 interviewers in attendance. Interviews were scheduled to last up to one hour to allow for open discussion. Interviews were taped and the investigators met regularly for discussion and identified 4 common themes. These were "Creating a Space", "Without Family You'd Be Lost", "Caring About Me" and "Issues of Control". A number of impressions were also considered valid as they resonated with all interviewers. Areas suitable for practice development were identified and presented to senior nurses within the organisation. The neurosurgery patients identified some important insights into hospital care and raised some issues needing further investigation. Through the information gathered through patient stories we hope to better meet the more fundamental needs of neuroscience and other hospital patients.

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Book Review

How to read pediatric ECGs

Park M, & Guntheroth, W. (2006) *How to read pediatric ECGs*, Mosby Elsevier, Philadelphia.

ISBN-13: 978-0-323-03570-5

Reviewed by Jason Birse

The skill to read an ECG is an essential tool for paediatric neuroscience nurses. This is especially important for nurses working within areas such as intensive care and emergency departments where subtle, transient changes in ECG rate and rhythm could be indicative of rising intracranial pressure. The numbers of children with complex congenital heart defects who are surviving surgical procedures are increasing. This means that nurses working in general paediatric wards have the potential to work with children who may develop complex arrhythmias.

Written by two paediatric cardiologists, Dr. Park and Dr. Guntheroth, this book offers a generalised view with a natural emphasis on cardiac abnormalities of the paediatric patient. Highlighted throughout the text is that the developing anatomy of the young child can mean that the ECG tracing will differ from that of adults. What may indicate an abnormality in an adult ECG may be a normal finding in a neonate recording. Similarly a young child's abnormalities are related more often to congenital structural changes, rather than the ischemic changes seen in the older adult, although toxins, trauma, and infection can all cause changes to a young child's rhythm and rate. Therefore the basic principles of interpretation of the ECG in children are identical to those in adults. However the correct interpretation of the ECG is potentially more difficult and a detailed knowledge of these age dependent changes is required.

These differences are outlined with the inclusion of over 70 case studies and each chapter concludes with review questions. Other case studies are provided including clear illustrative actual size ECG tracings. A systemic approach to interpretation is encouraged which provides a logical stepwise description of interpretation of each tracing.

Many of the chapters are devoted to the most common paediatric pathological conditions. All are illustrated with tracings of normal and abnormal readings with clear explanation of abnormalities. A large section is devoted to the most common structural abnormalities, atrial and ventricular hypertrophy. Characteristic ECGs are included along with two of the most common forms of ECG abnormalities in paediatric patients, ventricular conduction disturbances and chamber hypertrophies. Both right bundle branch block (RBBB), with the criteria for identifying left and right bundle branch block, and Wolff-Parkinson-White (WPW) are discussed in detail. Assessment of atrial and ventricular fibrillation is also included.

Of particular practicality is the section on the assessment of ST segment and T wave changes. Pathological changes in segments may signal serious myocardial problems such as ischemia, inflammation, and metabolic abnormalities. However it is crucially important to recognise these changes for correct diagnosis and management. A slight shift in the ST segment can be normal in children. Therefore it is important to be able to recognise pathological ST-T changes, which may be caused by pericarditis, myocarditis, or cardiomyopathy. An important section is the examination of electrolyte disturbances on the ST segment and R wave pattern, specifically hypo and hypercalcemia and hypo and hyperkalemia. Despite the rarity in paediatrics, which the authors acknowledge, a discussion on myocardial infarction is included along with examples of sequential changes of the ST segment and T wave and the corresponding location of infarction with the appropriate leads.

The concluding chapter describes two methods for the analysis of arrhythmias and atrioventricular conduction disturbances. Both are appropriate for analysing basic arrhythmias but not complex arrhythmias. Rhythm interpretation is the more simplistic focused on the rate and regularity of the tracing. The P wave method is more mechanism-orientated using the relationship of the P wave to the QRS complex. Again illustrative case studies are included with an in-depth interpretation using one or both methods.

Normal electrocardiographic values ranging in age intervals from neonate to adults are listed in the appendix.

The book is written with a primary focus on the diagnostic process with medical staff and students in mind. It is an invaluable tool for working with those children with suspected cardiac abnormalities. Included is a basic review of how to read ECG. However there are perhaps more straightforward texts for those who are beginners to reading ECGs. There is no information on how to perform an ECG. The appendix does include some brief tips to ensure optimal ECG tracings that may be of interest to nurses involved in the practicality of obtaining ECG recordings

Recent Publications

Baker, M (2006) 'Gizmos and Gadgets for the Neuroscience Intensive Care Unit', *Journal of Neuroscience Nursing*, Vol 38 (6): 248-260.

This article provides the reader with information about the use of technology in monitoring intracranial pressure, oxygenation and blood flow. Non invasive techniques include the use of the pupillometer, a microprocessor with an optical scanner that measures and analyses pupil changes, and Transcutaneous cerebral oximetry using near-infrared spectroscopy.

The use of intravascular jugular bulb venous pressure and brain tissue oxygen monitoring are also discussed as well as bedside cerebral blood flow monitoring and cerebral microdialysis.

Case vignettes are used to illustrate how the measurements using these methods relate to patient management and related nursing considerations.

Perkins, AM & Buchhalter JR (2006) 'Optimizing patient care in the pediatric epilepsy monitoring unit' *Journal of Neuroscience Nursing*, Vol 30 (4): 416-421,434

This article describes how a pediatric epilepsy monitoring unit of four years designed a process that resulted in alterations to some aspects of patient care and development of an education program for nurses in the unit. Useful reading for those working in similar units, or involved in the development of a similar unit.

Lasater M (2006) 'Intravascular temperature modulation in the neurosurgical critical care unit' *Journal of Neuroscience Nursing*, Vol 38 (5): 379-383.

An interesting article describing the use of an intravascular catheter to deliver chilled sterile saline through a closed loop system in order to decrease body temperature, and maintain constant monitoring of body temperature.

Alvarez M (2006) 'Craniopharyngiomas' *Journal of Neuroscience Nursing*, Vol 38 (5): 362-368.

Discusses these rare, benign, but fascinating cerebral tumours, their management, and related nursing considerations.

Villanueva NE, Thompson, HJ, Macpherson, BC, Meunier, KE, Hilton, E. (2006) 'The neuroscience nursing 2005 role delineation study: Implications for certification.' *Journal of Neuroscience Nursing*, Vol 38 (6): 403-408, 415.

Although ANNA does not have a certification process this article is interesting for its description of a survey undertaken to define the current role of the neuroscience nurse in the USA to assist in reviewing certification requirements and examination.

Saulino M & Jacobs BW (2006) 'The pharmacological management of spasticity.' *Journal of Neuroscience Nursing*, Vol 38 (6): 456-459.

Despite the title of the article the authors do describe common non pharmacological approaches to treatment of spasticity before the pharmacological approaches. They also mention the relationship of pain and spasticity, something that has been little noted in the past.

The importance of any treatment regime needing to be individual is also stressed.

Orser BA (2007) Lifting the fog around anaesthesia, *Scientific American*, June, 54-61

This article discusses how anaesthetic agents depress the central nervous system. The author emphasises the fact that until recently how these drugs produce their effects was

poorly understood. The findings of recent studies into the mechanisms of action of anaesthetic agents are discussed. Results demonstrate that specific nerve cells and receptors in the CNS produce specific effects of anaesthesia. It is predicted that in the future selective anaesthetic agents may be able to be developed thus reducing side effects.

An interesting article that discusses Australian and European research into the use of hypothermia in management of survivors of cardiac arrest. Mild induced hypothermia has been found to improve outcome in persons following out of hospital cardiac arrest.

Goecadin RG, Koenig MA, Stevens RD, Perbody MA (2007)
Intensive care for brain injury after cardiac arrest:
Therapeutic hypothermia and related neuroprotective
strategies, *Critical Care Clinics*, 23:619-636

COMING IN THE NEXT EDITION

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Example – journal article:

Chew, D. and Woodman, S. (2001) 'Making Clinical Decision in Neuroscience Nursing', *Australasian Journal of Neuroscience Nursing*, Vol. 14, No 4: 5-6.

Example – book: Buckland, C. (1996) *Caring: A Nursing Dilemma*. W.B. Saunders, Sydney..

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Example: (Thompson, Skene, Parkinson, and Baker, 2000). thereafter (Thompson, et al., 2000).

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