Neuroscience Nursing Acute and Critical Care - 6KNINP49

Level: 6
Credits: 15

Module leader: Ann-Marie Mestecky
Tel: 020 7848 3015
Email: ann-marie.mestecky@kcl.ac.uk

Module deputy: Sue Woodward
Tel: 020 7848 3469
Email: sue.woodward@kcl.ac.uk

This handbook must be read in conjunction with module information provided on KEATS, the King's E-Learning And Teaching Service. You will be given access to KEATS on enrolment. Important information relating to assessment and related regulations can be found in the Undergraduate Programme Handbook, available on KEATS and via the Student Services Centre.

This handbook can also be provided in alternative formats (such as large print) upon request to asc@kcl.ac.uk.
Contents

Module overview .......................................................................................................... 4

Module aim ............................................................................................................... 4
Learning outcomes ................................................................................................... 4
Teaching arrangements ............................................................................................ 4
Submitting coursework ............................................................................................ 5
Assessment criteria ................................................................................................... 5
Formative assessment .............................................................................................. 5
Summative assessment ........................................................................................... 5
Results and resubmissions for coursework .............................................................. 7

Learning resources ....................................................................................................... 8

Week 1 .......................................................................................................................... 8

Session 1 – Welcome ................................................................................................ 8
Session 2 & 3 — Introduction to Neurophysiology and Functional Anatomy of the Brain ............................................................................................... 8
Session 4 – Neurological Assessment ...................................................................... 9
Session 5 – Altered Consciousness ......................................................................... 9
Session 6: E-Learning - Cranial Nerves ................................................................. 9

Week 2 .......................................................................................................................... 10

Session 1 – Physiology of ICP and Cerebral Perfusion ............................................. 10
Session 2 – Management of Raised ICP ................................................................... 10
Session 3 – Brain Tumours ...................................................................................... 11
Session 4 – Pituitary Lesions ................................................................................... 11

Week 3 .......................................................................................................................... 12

Session 1 – Brain Stem Death................................................................................... 12
Session 2 — Head Injuries ........................................................................................ 12

Week 4 .......................................................................................................................... 13

Session 1 & 2 – Cerebral Circulation and Subarachnoid Haemorrhage .................. 13
Session 3 – Care and Management of Patients with Epilepsy ................................. 13

Week 5 .......................................................................................................................... 14

Session 1 – Acoustic Neuroma ................................................................................. 14
Session 2 – CNS Infections...................................................................................... 14
Session 3 – Hydrocephalus and EVDs .................................................................... 14

Week 6 .......................................................................................................................... 15

Session 1 – Spinal Anatomy and Physiology ............................................................ 15
Session 2 – Acute Management of Spinal Injuries................................................... 15
Week 7 .......................................................................................................................... 16

Session 1 – Autonomic Nervous System ................................................................. 16

Session 2 — Myasthenia Gravis ............................................................................. 16

Session 3 — Guillain-Barre Syndrome ................................................................. 16

Module evaluation.................................................................................................... 17

Action from previous evaluations.......................................................................... 17

Timetable.................................................................................................................. 18
Module overview
This module forms part of the BSc Clinical Practice. The module contributes to your programme of study by developing your clinical knowledge and decision making for patients with neurological disease and post trauma.

Module aim
This course will focus on care provided for adults with neurological conditions in the acute and critical care settings. The course will review trends in healthcare and developments within neuroscience which necessitate the provision of knowledgeable and skilled neuroscience nurses. The aims are:

- To review and evaluate the practice of neuroscience nursing
- To develop and evaluate specialist skills
- Review current research and apply this to clinical practice, providing evidence-based care

Learning outcomes
At the end of the course you will be able to:

1. Select and evaluate relevant research in order to promote evidence-based practice.
2. Demonstrate proficiency in the assessment, planning and evaluation of care for the neuroscience patient.
3. Review the therapeutic interventions for neuroscience patients.
4. Examine the evolving role of the neuroscience nurse within multi-disciplinary care provision.
5. Reflect and evaluate the professional role of self in caring for neuroscience patients within the context of NMC guidelines.

Teaching arrangements
An adult learning approach to learning aims to build on your experience as a qualified practitioner. You will have access to the course leader for personal tutorial time. You are invited to discuss any aspects of the course and to receive guidance and support with your academic development and assessed course work. We aim to help you to relate your course work to your clinical practice throughout the programme.

A variety of teaching strategies will be employed:

- Lectures with interactive discussion
- Patient scenarios
- Group work
- Personal and group tutorials
- Directed Reading/guided study
- Quizzes
- Electronic learning packages
- Independent study (75 hours)
Submitting coursework
For this module you are assessed by Ann-Marie Mestecky and Sue Woodward.

Assessment criteria
The written assignment carries 100% of the total course mark.

Formative assessment
Using the assignment guidelines you will present your case study to your peers on a date TBC. This is an opportunity for you to receive feedback from your peers and facilitator and to clarify any questions you may have.

You are required to complete all the e-learning activities by 30 July.

Summative assessment
Please note that any issue regarded as unsafe practice will constitute an automatic fail.

Word limit: 2,500 word essay.

You are strongly advised to seek tutorial guidance from one of the course lecturers. This should be undertaken a minimum of 4 weeks before the submission date for assignments.

Title
A critical evaluation of the nursing and interdisciplinary care and management for a neuroscience patient

Aim
The aim of this assignment is to enable you to explore the neurological and psychosocial consequences of a neurological disease/disorder for a patient that you have nursed and to critically evaluate your nursing care and the interdisciplinary management of these problems.

Summative guidelines
The main focus of the essay should be on the analysis of the nursing and interdisciplinary management of the chosen neurological and psychosocial problems.

Assignment Guidelines
- Give a brief description of the patient and their neurological disorder
- Select one neurological and one psychosocial problem resulting from their neurological disease/disorder (the psychosocial problem may relate to your chosen patient or their carer)
- Discuss the pathophysiology of the chosen problems
- Analyse the interdisciplinary management of the chosen neurological and psychosocial problem
- Critically evaluate your specific role in managing the patient problems
- With reference to the literature critically evaluate the effectiveness of the management
- Make recommendations for future practice.
- There must be integration of theory and practice
- Reference to a broad range of appropriate literature.
Examples of possible topics might include (these are examples only and are not designed to restrict your choice):

- Management of neurogenic shock and altered body image following spinal injury
- Management of vasospasm and anxiety in a patient with subarachnoid haemorrhage
- Management of raised ICP and disinhibited behaviour following head injury
- Management of sympathetic storming following a severe head injury
Coursework submission are provided on the modules KEATS site. It is essential that you use your candidate number on all assignments/examinations. Your candidate number, which will begin with X for the academic year 2016/17, will be available via Student Records on the King’s Intranet approximately one month after you enrol.

If you are unable to submit your work by the deadline please refer to the information in your programme handbook on “mitigating circumstances”. If you require further support in these circumstances you are advised to contact KCLSU.

Submission date for coursework: 18 July 2017, 11.59am

Late submissions will be accepted for 24 hours following the submission date. All work submitted late will be marked as normal but will be capped at the pass mark for the module. If your assignment is a hard copy please ensure you date stamp it and submit it to the submission room G15 James Clerk Maxwell Building. If your assignment is submitted electronically through TurnItIn, information about how to submit late will be provided on KEATS module sites under assessment information. Please label the file with your candidate number and double-check you have submitted the correct file.

The external examiner for this module is Anabella Gloster. Students are not to make direct contact with external examiners, in particular regarding their individual performance in assessments.

The College and its Examination Boards in the ten Faculties (Institutes/Schools, King’s Learning Institute and the Association of King’s College (AKC), work with over 500 external examiners to ensure the quality and standard of our taught awards. Find the latest report on the External Examiners Report page, navigate to the Faculty of Nursing and Midwifery section.

Results and resubmissions for coursework
Students will receive a provisional (unratified) mark for their coursework 4 weeks following submission. According to the method of submission as detailed on your KEATS site, if your work was submitted online you will be able to download marked coursework from KEATS; alternatively, if you completed a hard copy submission you can collect your coursework and feedback from the Student Services Centre.

Feedback will include the award of a numerical grade which remains provisional until ratified by the examination boards. The dates for the examination boards are available on KEATS. Ratified marks can be viewed via Student Records on the King’s Intranet, the Monday following the relevant examination board.

The marking criteria by which your work is judged are provided in full in your programme handbook. Please also refer to the section in your programme handbook on plagiarism and how to avoid it. If you have a query about how to refer to a specific piece of work please ask your module leader, your group leader or a member of library staff for guidance or please use King’s Libguides site.

The feedback you receive on your assignment will guide you towards how to do better next time or how to maintain your existing high standard!

If you do not understand your mark or the feedback you receive please contact Ann-Marie Mestecky.

If you are unsuccessful, it is recommended that you contact the module leader before submitting your second attempt. This will enable the module leader to provide you with an appropriate level of support as you prepare to resubmit your work.
Learning resources

Week 1

Session 1 – Welcome

By the end of the session students will:

- Have an understanding of the course learning outcomes, content, teaching strategies and methods of assessment
- Have introduced themselves to other course members.

Indicative reading

Course handbook
Post-qualification Undergraduate Programme Handbook

Session 2 & 3 — Introduction to Neurophysiology and Functional Anatomy of the Brain

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

- Identify the function of different cells within the nervous system
- Discuss the process for generation of an action potential
- Discuss the process of neurotransmission and the role of the synapse
- Analyse the role of neurotransmitters in health and illness
- Discuss the functional anatomy of specific areas of the brain and identify the deficits that ensue following injury/disease

Indicative reading


Please also see electronic reading list for more recent papers.
Session 4 – Neurological Assessment
By the end of the session students will be able to:

- Discuss the evidence base for neurological assessment using the Glasgow coma scale
- Critically analyse neurological assessment findings and correctly interpret such data

Indicative Reading


Please see electronic reading list for more recent papers.

Session 5 – Altered Consciousness
By the end of the session students will be able to:

- Discuss the causes and pathogenesis of altered consciousness
- Identify the different clinical states of altered consciousness

Indicative Reading

Session 6: E-Learning - Cranial Nerves
By the end of the session students will be able to:

- Demonstrates knowledge of the function of the cranial nerves
- Discuss the syndromes related to cranial nerve dysfunction
Week 2

Session 1 – Physiology of ICP and Cerebral Perfusion
By the end of the session students will be able to:

- Discuss the concepts of intracranial physiology
- Critically analyse the physiological impact of raised intracranial pressure and brain herniation syndromes

Indicative reading


Session 2 – Management of Raised ICP
By the end of the session students will be able to:

- Differentiate between the different waveforms and understand their significance
- Demonstrate an understanding of the various ICP monitors
- Critically analyse the nursing care of a patient with raised ICP

IndicativeReading


Session 3 – Brain Tumours
By the end of the session students will be able to:

- Demonstrate knowledge of the pathophysiology of brain tumours
- Identify the role of steroids in the management of brain tumours
- Discuss the medical and surgical options for treatment of brain tumours
- Analyse the care of patients undergoing radiotherapy/chemotherapy

Indicative reading:

Please also see electronic reading list for more recent papers

Session 4 – Pituitary Lesions
By the end of the session students will be able to:

- Demonstrate knowledge of the hormones released by the pituitary and their principal actions
- Explain the different types of pituitary tumour
- Analyse the nursing care for a patient pre and post excision of a pituitary tumour

Indicative reading

**Week 3**

**Session 1 – Brain Stem Death**
By the end of the session students will be able to:

- Discuss brain stem death
- Discuss the criteria to diagnose brain death
- Critically discuss the nurse’s role in the management and care of the patient and their loved ones.

**Session 2 — Head Injuries**
By the end of the session students will be able to:

- Discuss the pathophysiology of primary & secondary brain injury
- Appraise the current treatment options for raised ICP
- Critically analyse the nursing management of a patient with raised ICP with reference to recent studies
- Explore the long-term physical, psychological and social impact of head injury for the patient and family.

**Indicative Reading**


Week 4

Session 1 & 2 – Cerebral Circulation and Subarachnoid Haemorrhage
By the end of the session students will be able to:

- Review the anatomy and physiology of cerebral circulation
- Appraise the nursing management of a patient with SAH
- Discuss the pathophysiology of vasospasm
- Examine the potential management strategies and nursing interventions for a patient with vasospasm
- Discuss the possible causes of neurological deterioration in a patient with SAH and the appropriate nursing management

Indicative reading


Session 3 – Care and Management of Patients with Epilepsy
By the end of the session students will be able to:

- Differentiate between different seizure types
- Critically analyse the role of the nurse in maintaining safety of a patient undergoing seizure activity.
- Evaluate the evidence base for care of patients with epilepsy.

Indicative reading


Week 5

Session 1 – Acoustic Neuroma
By the end of the session students will be able to:

- Demonstrate knowledge of the functional deficits that ensue following damage to each cranial nerve
- Analyse the nursing care for patients with acoustic neuroma before and after surgery
- Demonstrate knowledge of the possible surgical approaches for excising an acoustic neuroma
- Explore the psychological and social impact of facial nerve palsy for the patient and family

Indicative Reading

Session 2 – CNS Infections
By the end of the session students will be able to:

- Demonstrates knowledge of the pathophysiology of meningitis, encephalitis, cerebral abscess and other CNS infections
- Analyse the care of a patient with a CNS infection

Indicative reading

Session 3 – Hydrocephalus and EVDs
By the end of the session students will be able to:

- Discuss the evidence base for the management of a patient with an EVD

Indicative reading


Week 6

Session 1 – Spinal Anatomy and Physiology
By the end of the session students will be able to:

• Demonstrates knowledge of the various spinal tracts
• Discuss the syndromes related to spinal cord injury

Indicative reading

Session 2 – Acute Management of Spinal Injuries
By the end of the session students will be able to:

• Discuss the pathophysiology of primary & secondary spinal injury
• Differentiate between spinal and neurogenic shock
• Identify appropriate interventions required for a patient with neurogenic and spinal shock
• Critically examine the management strategies for patients with spinal injury

Indicative Reading


See electronic reading list.
Week 7

Session 1 – Autonomic Nervous System
By the end of the session students will be able to:

- Discuss the physiological activities controlled by the sympathetic and parasympathetic nervous system

Indicative reading

Session 2 — Myasthenia Gravis
By the end of the session students will be able to:

- Revise the physiology of nerve conduction
- Explain the pathophysiology of myasthenia gravis
- Demonstrate knowledge of the medical treatment
- Differentiate between cholinergic and myastheniac crisis
- Analyse the nursing care of a patient with myasthenia gravis

Indicative reading

See electronic reading list.

Session 3 — Guillain-Barre Syndrome
By the end of the session students will be able to:

- Identify the pathophysiology of Guillain-Barre Syndrome
- Discuss approaches to medical management in the acute and rehabilitative phases of the disease
- Discuss the key nursing issues for caring for these patients

Indicative reading
Module evaluation
At the end of the module you are requested to complete the short online evaluation which will be available on your module KEATS site. Student evaluations are very important to us and are required by Health Education England and the regional London Local Education and Training Boards.

Action from previous evaluations
No actions from previous term.
<table>
<thead>
<tr>
<th>Teaching mode</th>
<th>Date</th>
<th>Type of session</th>
<th>Title</th>
<th>Time</th>
<th>Group</th>
<th>Room</th>
<th>Lecturer</th>
</tr>
</thead>
<tbody>
<tr>
<td>University based Study</td>
<td>11 May 2017</td>
<td>Introduction</td>
<td>Introduction to KEATS and the Module</td>
<td>10:00-11:00</td>
<td>All groups</td>
<td>FWB 2.45</td>
<td>AM Mestecky</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lecture 1</td>
<td>Neurophysiology</td>
<td>11:00-12:00</td>
<td></td>
<td>FWB 2.45</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lecture 2</td>
<td>Functional Anatomy of the Brain</td>
<td>12:00-13:00</td>
<td></td>
<td>FWB 2.42</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lecture 3</td>
<td>Functional Anatomy of the Brain</td>
<td>14:00-15:00</td>
<td></td>
<td>FWB 2.42</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lecture 4</td>
<td>Neurological Assessment and Altered States of Consciousness</td>
<td>15:00-17:00</td>
<td></td>
<td>FWB 2.42</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Directed Study</td>
<td>E-Learning - Cranial Nerves</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University based Study</td>
<td>18 May 2017</td>
<td>Lecture 1</td>
<td>Intracranial Physiology</td>
<td>10:00-11:00</td>
<td>All groups</td>
<td>FWB 2.45</td>
<td>AM Mestecky</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Group work</td>
<td>Management of Raised ICP</td>
<td>11:00-13:00</td>
<td></td>
<td>FWB 2.45</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lecture 2</td>
<td>Brain Tumours</td>
<td>14:00-15:45</td>
<td>308 &amp; P49</td>
<td>FWB 2.42</td>
<td>Vicky Hurwitz</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lecture 3</td>
<td>Pituitary Tumours</td>
<td>16:00-17:00</td>
<td></td>
<td>FWB 2.42</td>
<td>AM Mestecky</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Directed Study</td>
<td>E-Learning - ICP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University based Study</td>
<td>25 May 2017</td>
<td>Lecture 1</td>
<td>Brain Stem Death</td>
<td>10:00-11:00</td>
<td>308 &amp; P49</td>
<td>FWB 2.45</td>
<td>AM Mestecky</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lecture 2</td>
<td>Head Injury</td>
<td>11:00-13:00</td>
<td></td>
<td>FWB 2.45</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Directed Study</td>
<td>E-Learning - Parkinson's Disease</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University based Study</td>
<td>8 June 2017</td>
<td>Lecture 1</td>
<td>Cerebral Circulation</td>
<td>10:00-11:00</td>
<td>308 &amp; P49</td>
<td>FWB 2.45</td>
<td>AM Mestecky</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lecture 2</td>
<td>SAH</td>
<td>11:00-13:00</td>
<td></td>
<td>FWB 2.45</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tutorial</td>
<td>Assignment Guidelines</td>
<td>13:00-13:30</td>
<td></td>
<td>FWB 2.42</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lecture 3</td>
<td>Epilepsy</td>
<td>14:00-16:00</td>
<td></td>
<td>FWB 2.42</td>
<td>C. Queally</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Directed Study</td>
<td>E-Learning - Epilepsy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University based Study</td>
<td>15 June 2017 Thursday</td>
<td>Lecture 1</td>
<td>Acoustic Neuroma</td>
<td>10:00-11:00</td>
<td>308 &amp; p49</td>
<td>FWB 2.45</td>
<td>AM Mestecky</td>
</tr>
<tr>
<td>------------------------</td>
<td>-----------------------</td>
<td>-----------</td>
<td>------------------</td>
<td>-------------</td>
<td>-----------</td>
<td>---------</td>
<td>-----------</td>
</tr>
<tr>
<td></td>
<td>Lecture 2</td>
<td>Hydrocephalus and Management of EVDs</td>
<td>11:00-12:00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lecture 3</td>
<td>CNS Infections</td>
<td>12:00-13:00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Directed Study</td>
<td>E-Learning – Neurogenic Bowel</td>
<td></td>
<td>16:00-17:00</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>University based Study</th>
<th>29 June 2017 Thursday</th>
<th>Lecture 1</th>
<th>A&amp;P Spinal cord and vertebral column</th>
<th>10:00-11:00</th>
<th>p49 &amp; 308</th>
<th>FWB 2.45</th>
<th>AM Mestecky</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Group work</td>
<td>Acute management of SCI</td>
<td>11:00-13:00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lecture 2</td>
<td>Acute management of SCI</td>
<td>14:00-15:45</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Directed Study</td>
<td>E-Learning - Neuropharmacology</td>
<td></td>
<td>16:00-17:00</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>University based Study</th>
<th>6 July 2017 Thursday</th>
<th>Lecture 1</th>
<th>Autonomic Nervous system</th>
<th>10:00-11:00</th>
<th>308 &amp; p49</th>
<th>FWB 2.45</th>
<th>AM Mestecky</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lecture 2</td>
<td>Myasthenia Gravis</td>
<td>11:00-12:00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lecture 3</td>
<td>Guillain Barre Syndrome</td>
<td>12:00-13:00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Evaluation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Key:**
- FWB – Franklin-Wilkins building, Waterloo campus
- WBW – Waterloo Bridge Wing, Waterloo campus
- JCMB – James Clerk Maxwell building, Waterloo campus