



# CRITICAL FOR CARE

*A Vision for Post Graduate Critical Care Education and Training in Cheshire and Mersey: Designed by Professionals for Professionals*

Mary Jordan and Jane Glennon

## Critical for Care

---

THIS REPORT DETAILS A JOINT PROJECT TO DEVELOP THE VISION FOR POST GRADUATE EDUCATION AND TRAINING FOR NON-MEDICAL CRITICAL CARE STAFF IN CHESHIRE AND MERSEYSIDE (2010) USING THE SKILLS FOR HEALTH COMPETENCE BASED CAREER FRAMEWORK.

THE RESULTING EDUCATION AND TRAINING FRAMEWORK HAS BEEN DESIGNED BY FRONTLINE CRITICAL CARE DOCTORS, NURSES AND ALLIED HEALTH PROFESSIONALS.

COMPILED BY:

MARY JORDAN CHESHIRE AND MERSEY CRITICAL CARE NETWORK

JANE GLENNON SKILLS FOR HEALTH

## Acknowledgements

---

THE AUTHORS WOULD LIKE TO THANK THE MEMBERS OF THE REFERENCE GROUP, WHOSE HARD WORK AND DEDICATION, MADE THIS PROJECT POSSIBLE

SPECIAL THANKS ARE GIVEN TO DR GARY MASTERSON, MEDICAL LEAD FOR CHESHIRE AND MERSEY CRITICAL CARE NETWORK AND SARAH CLARKE, DIRECTOR (ACTING) AND LEAD FOR NURSING AND SERVICE IMPROVEMENT, CMCCN, FOR THEIR ADVICE AND SUPPORT

## CONTENTS

Executive Summary.....	5
Introduction .....	6
<b>What is Critical Care?</b> .....	6
<b>Critical Care in Cheshire and Mersey</b> .....	6
<b>Current Education and Training</b> .....	7
Background And Context of The Project.....	8
<b>Background</b> .....	8
<b>Context of the Project</b> .....	9
Project Aims & Objectives.....	11
<b>Project Aims</b> .....	11
<b>Project Objectives</b> .....	11
<b>End Products</b> .....	11
<b>Intended Benefits</b> .....	12
Project Structure .....	13
<b>Project Board</b> .....	13
<b>Strategy Group</b> .....	14
<b>The Reference Group</b> .....	14
Project Methods & Design .....	15
<b>Methodology</b> .....	15
<b>Limitations</b> .....	17
Project Outcomes .....	18
<b><i>A Career Framework for the Critical Care Workforce</i></b> .....	19
<b>Current Roles &amp; Skills Mix</b> .....	19
<b>Critical Care Pathways</b> .....	20
<b>Essential competences to meet patient need in critical care</b> .....	21

<b>Qualification Framework for the Career Framework .....</b>	<b>22</b>
<b>A Suite of Critical Care Competences on the SfH Website .....</b>	<b>23</b>
<b>The National Agenda .....</b>	<b>23</b>
<b>The Future Provision of Critical Care Education and Training .....</b>	<b>24</b>
<b>The Challenge .....</b>	<b>24</b>
<b>Competences as Building Blocks for Clinical Expertise .....</b>	<b>24</b>
<b>Assessment.....</b>	<b>24</b>
<b>The Role of the Practice Educator .....</b>	<b>25</b>
<b>Specialist Modules .....</b>	<b>25</b>
<b>How Can the Work Done by this Project Help You? .....</b>	<b>26</b>
<b>Commissioners .....</b>	<b>26</b>
<b>Employers.....</b>	<b>26</b>
<b>Leaders and Managers.....</b>	<b>27</b>
<b>Critical Care Staff.....</b>	<b>27</b>
<b>Education and Training Departments.....</b>	<b>28</b>
<b>Project Evaluation.....</b>	<b>29</b>
<b>What worked well? .....</b>	<b>29</b>
<b>What could have been done better?.....</b>	<b>29</b>
<b>Conclusions .....</b>	<b>30</b>
<b>Recommendations .....</b>	<b>30</b>
<b>Bibliography .....</b>	<b>31</b>
<b>Appendix .....</b>	<b>32</b>
<b>Appendix I – Critical Care Units across Cheshire and Mersey .....</b>	<b>32</b>
<b>Appendix II – Levels of Care.....</b>	<b>33</b>
<b>Appendix III – Key Standards and Principles .....</b>	<b>36</b>
<b>Appendix IV – Benefits Realisation .....</b>	<b>39</b>

<b>Appendix V - Skills for Health and National Occupational Standards</b> .....	40
<b>Appendix VI – National Occupational Standards for the Critical Care Pathway</b> .....	42
<b>Appendix VII – Project Contributors</b> .....	91
<b>Appendix VIII – Skills for Health Career Framework (1-8)</b> .....	93
<b>Appendix IX - National Occupational Standards Relavent to professions in Critical Care</b> .....	97
<b>Appendix X – Cheshire and Mersey Critical Care Network Education Framework</b> .....	113
<b>Appendix XI – Project Evaluation</b> .....	114
<b>Appendix XII – Glossary of Terms</b> .....	115

## EXECUTIVE SUMMARY

In line with Department of Health recommendations in *Modernising Nursing Careers (2008)*, *Modernising AHP Careers (2008)*, *A High Quality Workforce: Next Stage Review (2008)*, and the Quality Innovation, Productivity and Prevention (QIPP) agenda, Cheshire and Mersey Critical Care Network (CMCCN) are aiming to ensure a competent critical care workforce will contribute to optimising patient outcomes.

This document details a project undertaken by Cheshire and Mersey Critical Care Network (CMCCN) in partnership with Skills for Health (SfH) to provide the underpinning framework of National Occupational Standards (NOS) for the multidisciplinary non-medical critical care workforce. NOS describe performance as the outcomes of a person's work. They focus on what the person needs to be able to do as well as what they must know and understand to work effectively, and are indicatively linked to the Knowledge and Skills Framework (KSF). The NOS will provide the foundation of a transferable education and training package, with clear standards, to support the development of a competent critical care workforce.

Competence is vital at all stages of development, experts often having to attain new competence in other areas such as leadership and teaching. In the dynamic environment of critical care, practitioners must constantly evolve to keep up with new developments, and work itself includes the whole complex process through which individuals learn.

The Critical Care Education and Training Framework will enable the transformation of the current fragmented approach into a coherent multi-professional programme to be accessed by all professionals working within critical care. It is centred on the needs of the patient, the competences required by staff in practice, and the underpinning knowledge required. The programme developed using the Framework (outlined on page 7), will be aimed at all non-medical professional health care staff, who have a direct frontline role in the care and rehabilitation of the critically ill.

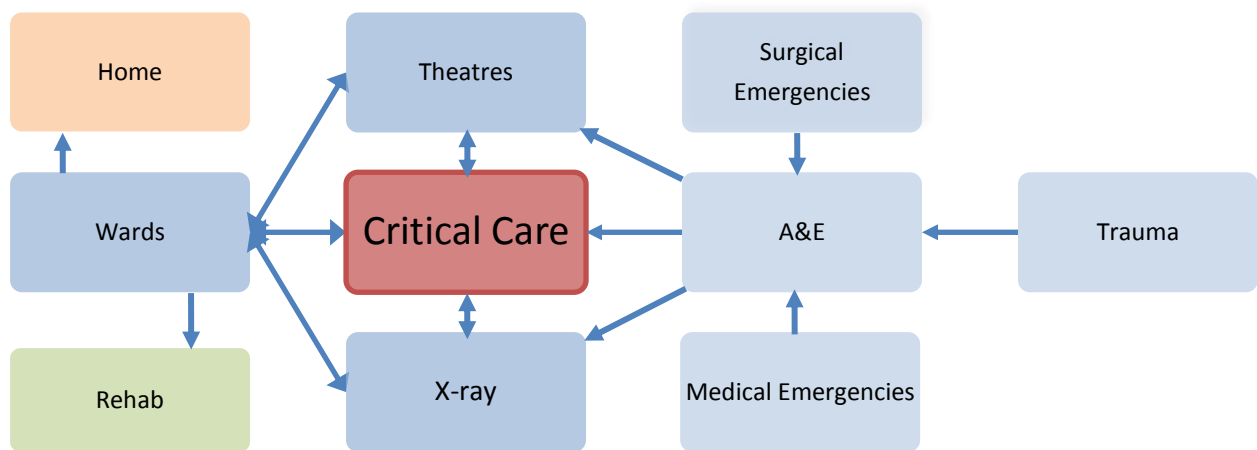
Theoretical knowledge will be delivered at essential, intermediate and advanced levels. The competences will be generic, shared and specialist.

CMCCN believe that this approach will improve the quality and equity of service provision for all patients in critical care across the region, thus improving the patient experience and clinical outcomes.

## INTRODUCTION

### WHAT IS CRITICAL CARE?

Critical care is a service provided for some of our sickest patients, who require extensive physiological and psychological support and rely on a highly skilled team to care for them. It is a high cost, low volume, demand led service, essential to acute Trusts for the delivery of core services such as elective surgery and emergency admissions.



Critical Interface – The Central Role of Critical Care (Source - ICS)

### CRITICAL CARE IN CHESHIRE AND MERSEY

Critical care represents only 1% of acute beds, yet each unit employs approximately 100 direct care and 25 indirect care non-medical professional staff, in Cheshire and Mersey this amounts to some 1200 people. *(Details of critical care units across Cheshire and Mersey can be found in Appendix I)*

Across Cheshire and Mersey there are:

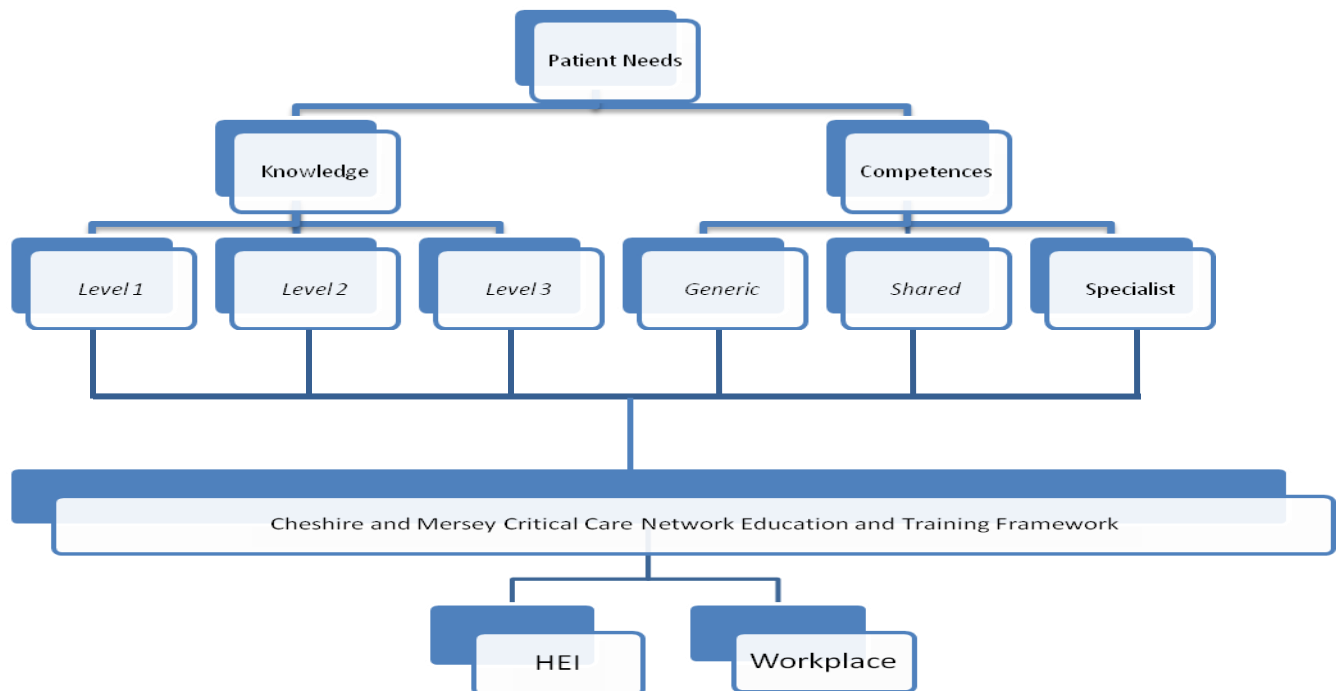
- 12 adult critical care units, 3 of which are specialist tertiary referral centres
- 184 general and specialist beds, admitting over 4000 level 3 patients per annum. *(Details of levels of care can be found in Appendix II).*
- Currently >400 patients per annum are transferred between Trusts due to lack of capacity or Need for expert management *(Cheshire & Mersey Primary Care Trusts 2007)*
- In addition, plans to increase total general capacity by 2011, range from 24 to 57 beds

There are also four Independent Providers providing predominantly Level 2 services.

## CURRENT EDUCATION AND TRAINING

As non-medical professions have moved towards undergraduate programmes, significant variances have developed in the types of courses offered by Higher Education Institutions (HEIs), with no clear standards for competence, leading to a disparity between levels of staff education in individual units and a restriction in the number of newly qualified graduates suitable for work in critical care. This observational evidence is reinforced by the increased number and severity of reported clinical incidents across the region. When the root causes of these incidents were investigated, over 50% of those relating to clinical practice or equipment use were found to be associated with inadequate or non-existent training. A training needs analysis carried out by CMCCN in 2008 expressed concern that even where appropriate training is available, staff shortages prevent individuals being released.

Cheshire and Mersey Critical Care Network (CMCCN) wish to ensure a competent critical care workforce, thus benefiting patient outcomes. As a result of the training needs analysis, (2008) the diagrammatic representation (*below*) of the proposed future framework for the provision of education and training in critical care was developed. A partnership approach between CMCCN and HEIs will ensure that the theoretical knowledge and practical skills of the professionals meet the requirements of the critical care setting. The use of a framework based on National Occupational Standards and the SfH Career Framework will be used to inform the development of modules incorporating the appropriate level of knowledge, competence and practice based assessment as well as education and training planning.



CMCCN Vision for education and training

In adopting this approach CMCCN seeks to support the commitments outlined in the NHS Improvement Plan (2004), to ensure quality and equitable access for all patients within our care.



### BACKGROUND

The critical care environment is a highly technical one, as new equipment and procedures are continually being developed; up to date training is imperative if staff are to practice safely. As well as the significant additional education and training required to meet National Institute for Clinical Excellence (NICE) recommendations, the critical care workforce faces a number of other challenges, including the need to remain fit for purpose as the National Health Service (NHS) undergoes organisational restructuring, staffing reviews and continuing financial constraints. The need for further education for critical care professionals is an essential part of developing and maintaining competence and although it consumes resources, Calpin-Davies (1996) assert that it should be viewed as an investment

*Comprehensive Critical Care (DH 1999)*, *Quality Critical Care: Beyond Comprehensive Critical Care (2005)* and *Critical to Success (Audit Commission 1999)* all make recommendations outlining the need for high quality critical care education for professionals working in intensive care units.

Much of the post registration training offered by local HEIs uses workplace learning modules which do not fulfil the specialist needs of staff working in critical care areas. Whilst academically sound, their content and learning objectives are often left to individual students and therefore the broader learning needs of staff working within the critical care environment are unlikely to be met; this in turn will affect clinical outcomes (NICE 2007).

The advanced level of knowledge and skills required by critical care staff demands specialist training, underpinned by robust, recognised and transferable standards. NICE Guidelines for *Care of the Acutely Ill (NG50 2007)* recommend that:

- Staff caring for these patients should have competence in monitoring, measurement, interpretation and prompt response to the acutely ill patient appropriate to the level of care they are providing. ( *Appendix II*)
  
- Education and training should be provided to ensure staff have these competences, and they should be assessed to ensure they can demonstrate them.

The delivery of a coherent educational programme, using Higher Education Institution commissioned courses, in house induction and training, as well as network training, is required to support the development of essential competence. Meya et al (2007) recommend that such courses should be designed jointly between commissioners and HEIs to ensure that the requirements of modern healthcare providers are addressed. CMCCN believes that its expertise can be utilised to facilitate the most appropriate education and training, including the nature of assessment in the workplace, and the availability of, and investment in, assessors.

Initiatives undertaken by CMCCN have addressed some training gaps in the short term; however consideration now needs to be given to the long term sustainability of a highly skilled critical care workforce. A coherent programme of education and training, aligned with the KSF, with sufficient and appropriate support and assessment for all professions working within critical care, is required to deliver a truly multi-professional team, and ensure the best outcomes for patients.

In 2005 Skills for Health (SfH) undertook a DH sponsored project under the umbrella of Modernising AHP Careers (*Modernising AHP Careers 2008*). The outcome of this project was a competence based framework for AHPs. The Career Framework (CF) provides a common language and currency to support workforce planning and career development by identifying the attributes of practitioners at different CF levels. It uses National Occupational Standards (NOS) to encapsulate the knowledge and skills required by posts, enabling the CF to be used to develop an educational framework for the multi-professional workforce.

CMCCN recognised that the principle of a competence based framework could support the aims laid out in its Training Needs Analysis (*CMCCN 2008*) to ensure that the multi-professional workforce in critical care are 'fit for purpose'. We embraced the opportunity to work with Skills for Health to develop a career framework for critical care with the coherent education and training programme outlined above.

## CONTEXT OF THE PROJECT

Cheshire and Mersey Critical Care Network have a strategic intent to improve the quality, productivity and effectiveness of the service to patients. This includes:

To improve patient outcomes by:

- Identifying any skill gaps and/or shortages alongside patient' pathways, and ways in which these gaps may be addressed
- Identifying where improvements may be made in the patients' experience
- Improve provision of skills by ensuring a consistent, "best practice" approach to training and development across geographic and service areas.

To improve staff, recruitment, retention and satisfaction by:

- Increasing opportunities for critical care staff to gain skills and greater job satisfaction
- Identifying career and education pathways.

For the purpose of the project it is necessary to offer a definition of critical care in order to clearly identify the healthcare professionals included in this project:

CRITICAL CARE IS PROVIDED BY DOCTORS AND NON-MEDICAL PROFESSIONAL STAFF FOR PATIENTS WITH SEVERE AND COMPLEX NEEDS, RESULTING FROM MULTI-ORGAN FAILURE, WHO REQUIRE INTENSIVE MONITORING. COMPLEX COMMUNICATION NEEDS AND ETHICAL CONSIDERATIONS CONTRIBUTE TO FURTHER CHALLENGES.

---

## PROJECT AIMS & OBJECTIVES

### PROJECT AIMS

- To support Modernising Health Care Careers in the Cheshire and Mersey Critical Care Network
- To identify education and training, and flexible methods of delivery
- To influence the national approach to education and training and workforce development in critical care services.

### PROJECT OBJECTIVES

- To identify competences (National Occupational Standards) in relation to pathways in Critical Care
- To produce competence profiles for a range of staff working in critical care services
- To produce a communication strategy which includes information on the Skills for Health website and information added into the Career Framework tool about these roles, and a final report
- To inform the development of an education programme to support the training and education of staff, using packages of learning that can be delivered in ways that suit the requirements of the workplace
- To inform the national agenda for critical care services
- To identify transferable methodology, education and training.

### END PRODUCTS

Competence maps of critical care services that can be used to underpin commissioning of packages of education and training that will enable staff to fulfil Key Standards and Principles (*see Appendix III*) in relation to practice.

## INTENDED BENEFITS

Upon commencing the project the following intended benefits were identified:

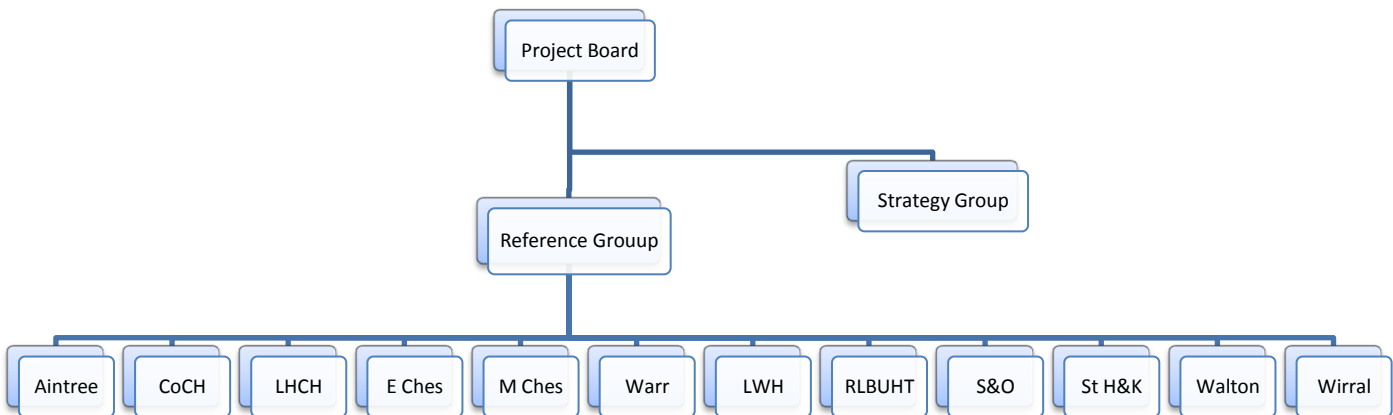
- Development of an educational framework based on National Occupational Standards will support transferability of knowledge and skills
- An education framework based on NOS and the Career Framework will support relevant education commissioning
- Education and training will be rooted in the requirements of the patient and the critical care environment, ensuring 'fitness for purpose' of staff
- Improved accessibility to education packages will benefit a range of healthcare careers
- Improved accessibility to education packages will help to create a competent critical care workforce
- Further development of a national career and educational framework for the critical care workforce.

The project is limited to non-medical professionals working in adult critical care services, and at this stage does not include medical practitioners. *(A detailed description of intended benefits is demonstrated in the matrix table in Appendix V).*

## PROJECT STRUCTURE

The project governance has ensured the close involvement of the relevant professional groups and employer representatives. The structure and quality assurance arrangement for this project include:

- A Project Board
- A Strategy Group
- A Reference Group



*Project Structure*

## PROJECT BOARD

The project board comprised an executive group working with the project manager to ensure that:

- Risks were identified, assessed and managed
- The project was delivered to time and within the financial target set.

The project manager was accountable to the chair of the project board for successful delivery of the project.

## STRATEGY GROUP

The Strategy Group consisted of key nursing and allied health professionals as well as representation from the medical profession, HEI and Strategic Health Authority. The aim of this group was to:

- Act as critical contributors and provide professional leadership input into the project to ensure the agreed outcomes are achieved
- To support the adoption of the outcomes across Cheshire and Mersey
- To contribute to the production of a competence based career framework
- To monitor the progress of the project
- To ensure the successful implementation for the project.

*(A list of all members of this group is included in the Project Contributors - Appendix VII).*

## THE REFERENCE GROUP

The reference group membership consisted of operational professionals from the critical care services included in this project. The main aim of this group was to:

- To act as critical contributors and provide clinical knowledge and expertise to the project, including the assessment and analysis of National Occupational Standards in relation to the current workforce and patient requirements, to ensure accuracy and consistency
- To contribute towards the development of a competence based career framework
- To monitor the progress of the project.

*(A list of all members of this group is included in the Project Contributors - Appendix VII).* In addition to the main group, small individual sub-groups in each Unit addressed specific areas of the patient pathway. This reduced the workload and number of meetings of the full group. The Trusts participating in this activity are represented on the previous page.

## PROJECT METHODS & DESIGN

The timeframe for the project was twelve months (June 2009 – June 2010).

In keeping with the timescale of the project, the project concentrated on general adult critical care across Cheshire and Mersey, although staff from the specialist centres were active participants.

## METHODOLOGY

A blend of qualitative and quantitative approaches was adopted, using a variety of data collection tools. These tools were developed by the project manager and critiqued and validated by the strategy and reference group members (*see Appendix VI*). The objective of these tools was to collate data on the following:

- Patient journey
- Functions along the patient journey
- Workforce profiles
- Clinical and non clinical competences
- Underpinning education.

Critical care accommodates patients from all areas of the hospital and there is no 'average patient', the patient journey comprised a range of journeys, which were broken down systemically.

Qualitative data collection included small group workshops within the Reference Group to identify patient pathways, patient needs, NOS required to meet those needs and the specialist knowledge to support the NOS in the critical care environment. (*Outputs can be found in Appendix VI*)

In order to produce competence profiles for a range of staff working in critical care services, a total number of 41 job descriptions were collected. All job descriptions were grouped in the job titles with commensurate Agenda for Change pay bands (as written on job descriptions) and individually examined for content of information. It soon became clear that the information contained in the various job descriptions was inconsistent, and did not accurately reflect the range of work carried out in the critical care environment. Instead, the Career Framework descriptors were used alongside identification of NOS



relevant to particular members of the multi-professional team. (*Appendix VIII*). These lists offer a range of NOS identified as useful to practice, which can be updated as practice changes and develops in line, for example, with changes in technology.

The methodology ensured the data collected identified the following:

- Patient pathways for critical care
- Critical Care workforce information
- National Occupational Standards that meet the needs identified in the patient pathways
- National Occupational Standards (NOS) used to populate the career framework for the critical care workforce
- Standards of practice that are transferable across Cheshire and Mersey.

As a large scale project, the collection of data was divided into three phases.

#### PHASE 1:

- The workforce data collected and analysed in the 2008 Training Needs Analysis (*CMCCN 2008*) was a vital precursor to this project and triggered the skills mapping process against levels of the career framework, to inform future commissioning of appropriate education and training
- Data on patient activities, which included identifying patient pathways and functions along those pathways, was collected and analysed.

#### PHASE 2:

- Identified NOS in relation to functions along the patient pathway.
- Highlighted gaps or inadequacies in current NOS in relation to critical care

All information was validated by Reference Group members.

#### PHASE 3:

- Identified a framework within which appropriate education and training could be delivered
- Identified methods of delivery to meet the needs of service
- As a result, it was possible to design a pilot module.

## LIMITATIONS

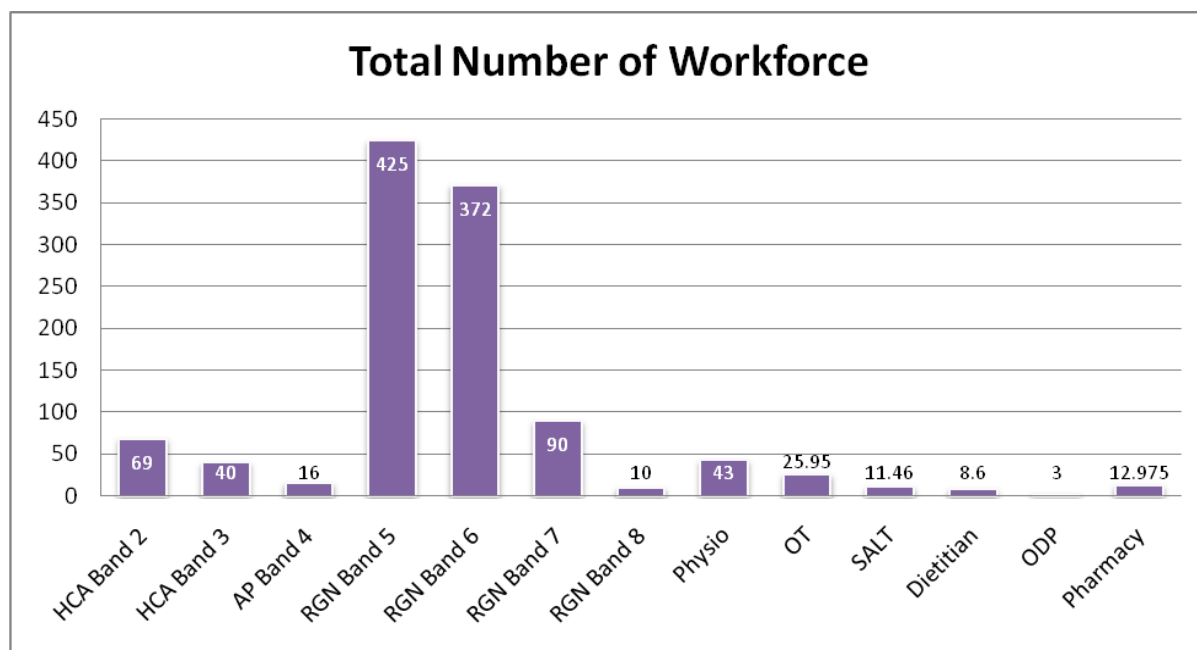
The need to complete the project within the time frame meant that decisions had to be made regarding what could realistically be achieved. The project was restricted to non-medical multi-disciplinary critical care professional staff working in general adult critical care units. However, the prospect of a 'flu pandemic has highlighted the need to address skills gaps at paediatric level.

## PROJECT OUTCOMES

The following project outcomes were achieved.

Project Objective	Output	Achievement
<b>To produce competence profiles for a range of staff working in the Critical Care services</b>	A career framework for the non-medical critical care workforce	Job descriptors at level 5- 6, 7-8 were produced for nursing and AHPs detailing competences required at each level ( <i>Appendix VIII</i> )
<b>To identify functions along the patient pathway</b>	Critical Care pathways	As there is no average patient in critical care, a series of pathways, arranged systemically were produced, functions along each were identified ( <i>Appendix VI</i> )
<b>To identify a suite of competences (National Occupational Standards) in relation to pathways in Critical Care</b>	National Occupational Standards to meet patient needs in critical care	Clinical and non clinical competences have been identified and mapped to critical care functions along the patient pathways and levels 5-8 of the career framework and are indicatively linked to the KSF ( <i>Appendix VI</i> )
<b>To inform the development of an education programme to support the training and education of staff using packages of learning that can be delivered in ways that fit the requirements of the workplace. This will include consideration of the use of short modules, IT support, tutorials and tutor support, work based learning and practice assessment.</b>	Post graduate qualification framework for levels 5-8 of the career framework	A validated, transferable progressive post graduate qualification framework which ensures the competence of critical care staff. The programme should be delivered on a virtual platform, readily accessible to suit the needs of the service. It includes, work based learning, 1:1 tutorial support and robust assessment
<b>To produce a communication strategy including information on Skills for Health website</b>	A Final report distributed across the critical care community.  A critical care section on the Skills for Health website	The Project Manager and Network Director were invited to address national conferences and share the project with other networks across the country
<b>To Inform the national agenda for Critical Care services</b>	National Occupational Standards to meet patient needs in critical care	The project has received encouragement from the education sub-group of Critical Care Nursing Education Forum, (CC3N) which includes representation from DH

### Project Outcomes & Achievements



Total Number of Critical Care Workforce Across Cheshire and Mersey

The table above illustrates the total number of the critical care workforce across Cheshire and Mersey. Nurses make up the largest group. Allied health professionals are not employed directly by critical care units, rather their services are bought in from other departments. The figures above represent the recommended numbers of allied health professionals required to staff the beds across the region. (NICE NG83) (Details of job titles can be found in the glossary in Appendix XII).

## CURRENT ROLES & SKILLS MIX

Nurse grades range from Agenda for Change (AfC) pay band 5 to band 8d depending on their roles and skills. Critical care pharmacists are banded at AfC pay band 8a, whilst other critical care AHPs are at AfC pay band 7.

Critical care employs a limited number of healthcare assistants at bands 2 and 3, and some assistant practitioner roles are beginning to emerge, predominantly in tertiary referral centres, however these staff groups were not included in the scope of the project.

There is no automatic read across from Agenda for Change pay bands to the Skills for Health (SfH) Career Framework levels. Agenda for Change in the NHS pay system incorporates three facets:

- Job evaluation
- The Knowledge and Skills Framework (KSF)
- Terms and conditions.

In contrast, the SfH Career Framework uses descriptors to identify aspects of a job which include levels of knowledge and skills required, responsibility and autonomy and complexity of decision making.

The Descriptors are:

- Knowledge, skills, training and experience
- Supervision
- Professional and vocational competence
- Analytical/clinical skills and patient care
- Organisational Skills and autonomy/freedom to act
- Planning policy and service development
- Financial, administration, physical and human resources
- Research and development.

The Career Framework describes nine levels (*see Appendix VIII*). ([www.skillsforhealth.org](http://www.skillsforhealth.org)).

Due to inconsistencies, it was not possible to accurately identify the career framework level of the professionals delivering care and rehabilitation to the critically ill using the job descriptions collected. The Strategy Group decided it would be more useful to create example job descriptors at levels 5-8 of the career framework. This work will be carried out by Skills for Health

## CRITICAL CARE PATHWAYS

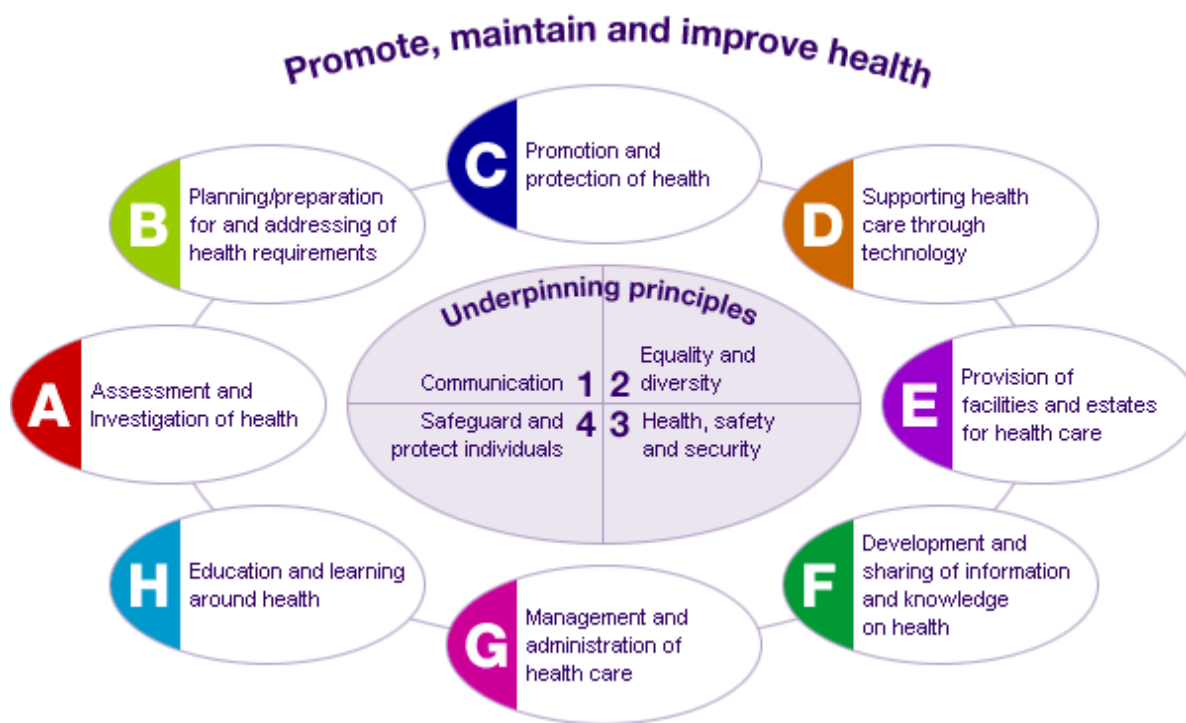
To ensure that clinical competences for each level of the career framework are transferable across critical care providers, patient pathways were identified. The "patient pathway" is the route that a patient will take from their first contact with a member of the critical care team, when their level of organ support is at Level 2 (or deteriorating to that level) to their restoration to Level 1 (*details of levels of care can be found in Appendix II*). This will include any period of referral to Outreach services. Events such as consultations, diagnosis, organ support and treatment, medication, preparing for discharge or transfer can all be mapped onto the patient's pathway. The reference group members identified and defined systemic patient pathways as well as a number of cross-cutting areas.

Patients can be in critical care as a result of trauma or following elective surgery, they can have a medical or surgical history or a sudden and rapid deterioration on the ward. There is no 'average' patient and staff must be ready to respond to whatever presents. CMCCN has produced a detailed service specification to ensure commonality in services provided by all Trusts, and this requires consistency in standards of staff training.

**ESSENTIAL COMPETENCES TO MEET PATIENT NEED IN CRITICAL CARE**

The Skills for Health’s Functional Map identifies underpinning principles and key overarching functions performed by health professionals (*below*). It organises all of the NOS in the Skills for Health database into the functional areas.

The clinical skills required in critical care require greater depth of knowledge and a higher level of autonomous decision making than are fundamental to care in ward areas. The Reference Group identified some gaps in NOS, which will be addressed as part of Skills for Health ongoing review of National Occupational Standards. (*Details of, career framework levels and competences relevant to professions in critical care can be found in Appendices VIII and IX respectively*).



Health Functional Map ([www.skillsforhealth.org.uk](http://www.skillsforhealth.org.uk))

Specific competences for the pathways were identified and validated by Reference Group members. *Appendix VI* illustrates the elements of the patient pathway and the required specific competences in detail as well as the additional underpinning knowledge required in the critical care environment.

## QUALIFICATION FRAMEWORK FOR THE CAREER FRAMEWORK

The work undertaken by the project has led to an initial partnership between CMCCN and Edge Hill University, to develop a pilot module of an education programme linked to the career framework in the critical care context.

The programme proposed has three stages, and aims to enable critical care professionals to grow and develop expertise throughout their careers. Each stage delivers scientific theoretical learning through a Virtual Learning Environment (VLE) with 1:1 tutor support and experiential work-based learning through a series of systemic and cross cutting mini-modules, resulting in a validated post graduate qualification. The size of the modules and flexibility of the method of delivery will encourage access to the learning environment for a wider variety and greater number of health professionals. *(A diagrammatic representation can be found in Appendix X)*

In order to assess the practicalities of delivering such a programme Edge Hill proposed a pilot module, the content of which has been determined by a sub-group of the Reference Group. They have designed a module – ‘Essentials of Critical Care’. It is aimed at post preceptorship staff and covers the pharmacology of the most commonly used drugs in critical care, (defined by CMCCN Pharmacy Group), as well as vascular access and line care. These elements are underpinned by an understanding of infection control. The pilot would be aimed at approximately 10-15 students and could commence in January 2011. It is envisaged that it would become part of a suite of ‘Essential’ modules to be delivered at Stage 1.

### STAGE 1 – NEWCOMERS (POST PRECEPTORSHIP) TO CRITICAL CARE

This stage covers the essential knowledge and skills required to practice safely and equates to Level 5 of the career framework. The work-based learning element includes the use of practice educators to set clear goals, support development and evaluate progress. Formal strategies to facilitate the acquisition of learning are buttressed by moral and emotional support to help the newcomer acclimatise to the critical and traumatic environment.

***SUCCESSFUL COMPLETION RESULTS IN THE AWARD – POST GRADUATE CERTIFICATE IN CRITICAL CARE***

### STAGE 2 – SENIOR PRACTITIONERS WITH MORE THAN 3 YEARS EXPERIENCE

This stage aims to further develop the knowledge and skills of experienced staff, including some specialised modules, and transition to level 6/7 of the career framework. Students will also have the opportunity to acquire some essential non-clinical skills such as leadership and teaching.

***SUCCESSFUL COMPLETION RESULTS IN THE AWARD – POST GRADUATE DIPLOMA IN CRITICAL CARE***

### STAGE 3 – ADVANCED/CONSULTANT PRACTITIONERS

This stage aims to develop mastery and equates to level 7/8 of the career framework. Clinical competence is the baseline from which the professional builds their advanced or consultant practice, whilst non-clinical skills enable staff to make the transition through to leadership and management roles. This stage includes a dissertation.

*SUCCESSFUL COMPLETION RESULTS IN THE AWARD - MSC IN CRITICAL CARE.*

### A SUITE OF CRITICAL CARE COMPETENCES ON THE SFH WEBSITE

The inclusion of a suite of competences identified for critical care on the Skills for Health website will enable managers and staff to use the SfH tools to ensure the right skill mix is in place to deliver a safe and effective service.

### THE NATIONAL AGENDA

This project was designed to address the training and development needs of critical care staff across Cheshire and Mersey and ensure a transferable approach with clear standards. However during the course of the year other networks across the country have shown considerable interest.



### THE CHALLENGE

Developing effective education and training for the diverse critical care workforce represents a considerable challenge. Brookfield (1984) contends that as more adults engage in learning each with their own learning styles and personalities, the curriculum must be individualised to maximise learning potential. However as commissioners demand greater efficiency in post-registration education, education providers have to balance flexibility, choice and convenience with cost effective and worthwhile outcomes for all levels of the service.

### COMPETENCES AS BUILDING BLOCKS FOR CLINICAL EXPERTISE

It has been suggested that the standardisation of competences can lead to the minimum standard being set at the lowest common denominator, thus lacking ambition (Scholes 2006). One of the reasons cited is variability in the work base. Across Cheshire and Mersey there is indeed a wide variation between critical care units in tertiary referral centres, university teaching hospitals and district general hospitals. The Reference Group was drawn from all units across the Network with a view to addressing this issue. They have proposed a shadowing system to enable staff to gain experience in a range of environments.

By working together they also achieved consensus regarding key competences.

The development of a competence framework for critical care aims to ensure that professional staff can demonstrate the necessary knowledge and skills to carry out given tasks; however this task orientated approach is not divorced from the acquisition of underpinning scientific knowledge, and the application of that knowledge to achieve mastery. The competences are a foundation for the educational framework and the Reference Group has worked to ensure that:

- The programme meets the needs of critically ill patients
- There is clear description of performance indicators and the requisite underpinning knowledge at each level of the career framework
- Assessment is robust with clear standards.

### ASSESSMENT

Studies since 1990 (Lankshear 1990) have identified that mentors and assessors are reluctant to fail students, particularly those on post-registration courses. Assessors report a heightened vulnerability

when assessing colleagues. Various solutions have been suggested; Endacott et al (2003) propose assuming that the student is competent in their everyday practice and therefore only assess new or advanced skills, whilst Scholes and Endacott (2002) advocate the use of senior staff who may be more objective.

This programme proposes to achieve triangulation by adopting a blended approach to assessment.

- The use of external assessors, using a round robin approach across all units in Cheshire and Mersey
- The use of objective Performance Criteria in National Occupational Standards
- Log books
- Objective Structured Clinical Examination (OSCE)
- University examination of theoretical knowledge.

## THE ROLE OF THE PRACTICE EDUCATOR

The role of practice educator was introduced into critical care units across Cheshire and Mersey following the recommendations of *Making a Difference (DH 1999)*. Their role is to facilitate learning within the unit and support mentors. The CMCCN Practice Educator Task Group provides vital peer support across the network and will be the vehicle through which this programme is implemented. They are vital to effective assessment and it is envisaged that they will act as external assessors to other units across the network.

## SPECIALIST MODULES

The remit of this project covered general adult critical care, however further work is needed to develop specialist modules to address the needs of units providing a specialised tertiary service for:

- Cardio-thoracic
- Neurological
- Burns
- Obstetrics and Gynaecology
- Renal
- Paediatrics (to address issues raised during the 'Flu Pandemic).

## HOW CAN THE WORK DONE BY THIS PROJECT HELP YOU?

### COMMISSIONERS

As commissioners of critical care services, you have to ensure that the skills and competences to deliver quality services are in place.

The Suite of NOS for Critical Care can:

- Support the QIPP agenda.
- Support the commissioning and delivery of safe and cost effective services.

You can use them to:

- Develop your vision for improving services
- Specify required quality outcomes for service provision
- Ensure those delivering critical care services have the required knowledge and skills
- Support an integrated approach to planning, contracting and monitoring service delivery.

### EMPLOYERS

As employers, you need to ensure that registered staff have the necessary skills and competences to provide quality critical care services, and are given access to appropriate training opportunities. NOS are indicatively linked to the KSF and can be used to add detail to the KSF outline, helping to define education and training requirements for members of staff.

The Suite of NOS for Critical Care can:

- Support better quality care
- Contribute to meeting Care Quality Commission (CQC) performance indicators
- Help you become the provider of choice.

You can use them to:

- Embed them in corporate policies and governance frameworks
- Raise knowledge and skill levels and provide career development opportunities
- Develop capacity and capability
- Audit service delivery and monitor service improvements.

## LEADERS AND MANAGERS

As leaders and managers you need to ensure that appropriate actions are taken to support workforce and service development in critical care

The Suite of NOS for Critical Care can:

- Support the development of patient centred critical care
- Help ensure critical care services are consistent, in keeping with CMCCN service specification
- Provide a benchmark of best practice
- Provide a framework for staff development and service improvement
- Support new ways of working.

You can use them to:

- Ensure you have the right skill mix
- Design job roles, tasks and job descriptions
- Embed them in performance management
- Identify staff training and development needs.

## CRITICAL CARE STAFF

As staff working in critical care, you have a professional responsibility to ensure you are safe to practice and can communicate effectively with patients who feel 'dehumanised' (*The Critically Ill Patient Journey – A DVD recording a patient experience produced by CMCCN 2010, [www.cmccn.nhs.uk](http://www.cmccn.nhs.uk)*)

The Suite of NOS for Critical Care can:

- Increase job satisfaction by helping you meet the needs of your patients
- Provide you with a framework to support self evaluation
- Support your professional development.

You can use them to:

- Ensure the skills development you need is built into your personal and team objectives

- Discuss the skills and knowledge with your line manager to ensure a shared understanding of the implications for your job role and working practice and KSF
- Challenge practice which is not consistent with the principles and underpinning NOS.

## EDUCATION AND TRAINING DEPARTMENTS

NOS are an integral part of the critical care education framework

The Suite of NOS for Critical Care can:

- Feature in the units of learning to be included on the Qualifications and Credit Framework
- Provide shared and agreed benchmarks of best practice
- Reflect what employers want their staff to be able to do
- Provide evidence of effective care.

You can use them to:

- Commission education and training to address workforce development needs
- Develop post graduate training and assessment programmes
- Design in-service training and assessment programmes for the critical care workforce.

## PROJECT EVALUATION

An initial analysis of the project, its activities and vision was undertaken by circulating a questionnaire to the front line professionals who had been involved in this project. The approach was a blend of quantitative and qualitative questions. Members of the Reference Group were asked what worked well, what could have been better and whether they would actively support the implementation of a competence based framework for education and training in critical care. A full copy of the questionnaire can be found in *Appendix XI*.

When asked if the project had been worthwhile undertaking and if they would actively support implementation of a competence based framework 100% of respondents scored 4 or 5.

### WHAT WORKED WELL?

Getting time away from a busy unit was essential to enable this group to concentrate on being creative. They enjoyed meeting and working with people from different disciplines and backgrounds.

The range of expertise from the different types of unit has enabled the project to address the issues of variation in both the work base and what are considered to be 'core' competences.

As a project manager, the opportunity to bring critical care professionals together to design the education and training to meet the needs of their patients has been a pleasure. Having the help and support of a member of the Skills for Health team was invaluable; she was able to address the detailed dissection of the NOS and any gaps in relation to critical care.

### WHAT COULD HAVE BEEN DONE BETTER?

Many had struggled to understand the strategic vision and would have liked more time, particularly to research the finer details of the NOS. However most concurred with one respondent who said:

*"I think that how it was delivered was done in the only way it could be"*

---

## CONCLUSIONS

Improved clinical outcomes for patients requires equal and equitable access to the best critical care services across Cheshire and Mersey, which in turn requires the highest standards of education and training for all staff.

The dynamic nature of healthcare requires staff to keep up to date with the latest developments and be equipped with the expertise to respond to all medical, surgical and traumatic life threatening situations. In critical care, minutes matter.

Long hours and days, and sometimes weeks and months, demand a different skill set. Frightened patients, and their relatives, need constant reassurance; they need to be able to trust the staff holding their life in their hands (*A critically ill patient journey DVD – 2010*)

In an environment such as critical care, inevitably patients die, some may become organ donors. These patients and their relatives require staff to be honest and explain their condition in a sensitive and understanding way.

Any package of education and training for critical care staff must address all of the above.

## RECOMMENDATIONS

1. CMCCN should proceed with the proposed pilot module – Essentials of Critical Care with a view to commencing from January 2011.
2. A full evaluation of the pilot module should be undertaken
3. The CMCCN Education and Training Framework should be commissioned, if the pilot module is evaluated as a success
4. A future joint project with Skills for Health should address the specialist areas not included in this project
5. The results of this project should be shared widely across the home countries in an effort to achieve clear national standards for critical care education and training

## BIBLIOGRAPHY

- Audit Commission. (1999). *Critical to Success*. Audit Commission.
- Brookfield S (1984). *Adult Learners, Adult Educators and the Community*. Milton Keynes: Open University.
- Calpi-Davies. (1996). Purchasing Post Qualifying Professional Education in the Health Care Sector. *Journal of Nursing Management* , 4, 133-141.
- Cheshire and Mersey Critical Care Network. (2007). *Business Plan 2007-8*. Cheshire and Mersey Critical Care Network.
- Cheshire and Mersey Critical Care Network (2008) *Critical for Care 2008-2018: A Training Needs Analysis* Cheshire and Mersey Critical Care Network
- Cheshire and Mersey Primary Care Trusts. (2007). *Cheshire and Mersey Critical Care Services in 2007 and Beyond: An Interim Review of Capacity Pressures and Risks*. Cheshire and Mersey Critical Care Network.
- Clarke, S. (Director). (2010). *The Critically Ill Patient Journey* [Motion Picture]. CMCCN
- Critical Care Stakeholder Forum. (2005). *Quality Critical Care: Beyond Comprehensive Critical Care*. London: Department of Health.
- Darzi. (2008). *A High Quality Workforce. NHS Next Stage Review*. London: Department of Health.
- Department of Health. (2000). *Comprehensive Critical Care: A Review of Adult Critical Care Services*. London: Department of Health.
- Department of Health. (1999). *Making a Difference*. London: Department of Health.
- Department of Health. (2008). *Modernising AHP Careers*. London: Department of Health.
- Department of Health. (2008). *Modernising Nursing Careers*. London: Department of Health.
- Department of Health. (2004). *The NHS Improvement Plan: Putting People at the Heart of Public Services*. London: Department of Health.
- National Institute for Health and Clinical Excellence. (2007). *The Care of the Acutely Ill: NICE Guidance 50*. NICE.
- Skills for Health. *The Health Functional Map*. Retrieved June 12, 2009, from Skills for Health: [www.skillsforhealth.org.uk](http://www.skillsforhealth.org.uk)



## APPENDIX

### APPENDIX I – CRITICAL CARE UNITS ACROSS CHESHIRE AND MERSEY

	Bed Nos.	
	Level 3	Level 2
<b>Aintree University Hospitals NHS Foundation Trust University Hospital Aintree</b>	9	8
<b>Countess of Chester NHS Foundation Trust</b>	5	8
<b>Liverpool Heart and Chest Hospital NHS Trust</b>	17	7
<b>East Cheshire NHS Trust Macclesfield District General Hospital</b>	4	2
<b>Mid Cheshire Hospitals NHS Foundation Trust Leighton Hospital</b>	7	4
<b>Warrington and Halton Hospitals NHS Foundation Trust Warrington Hospital</b>	6	8
<b>Liverpool Women’s Hospital NHS Trust Liverpool Women’s Hospital</b>	0	2
<b>Royal Liverpool and Broadgreen University Hospital Trust Royal Liverpool Hospital</b>	17	10
<b>Southport and Ormskirk NHS Trust Southport and Formby District General Hospital</b>	6	4
<b>St Helens and Knowsley NHS Trust Whiston Hospital</b>	8	6
<b>The Walton Centre for Neurology and Neurosurgery</b>	9	4
<b>Wirral University NHS Foundation Trust Arrowe Park Hospital</b>	7	11

## APPENDIX II – LEVELS OF CARE

Level 0 Criteria	Examples
<b>Requires Hospitalisation</b> <b>Needs can be met through normal ward care</b>	<ul style="list-style-type: none"> <li>• Intravenous Therapy</li> <li>• Observations required less frequently than 4 hourly</li> </ul>

Level 1 Criteria	Examples
<b>Patients recently discharged from a higher level of care</b>	Patients requiring a minimum of 4 hourly observations
<b>Patients in need of additional monitoring/clinical interventions, clinical input or advice</b>	<ul style="list-style-type: none"> <li>▪ Requiring a minimum 4 hourly observation on the basis of clinical need</li> <li>▪ Requiring continuous oxygen therapy</li> <li>▪ Boluses of intravenous fluid (need not determined by CVP)</li> <li>▪ Epidural analgesia or Patient Controlled Analgesia in use</li> <li>▪ Parenteral Nutrition</li> <li>▪ Post-operative surgical patients who are still requiring 4 hourly observations</li> <li>▪ Requiring administration of bolus intravenous drugs through a central venous catheter</li> <li>▪ With a tracheostomy</li> <li>▪ With a chest drain in situ</li> <li>▪ Requiring a minimum of 4 hourly GCS assessment</li> <li>▪ With diabetes receiving a continuous infusion of insulin</li> <li>▪ Who are at risk of aspiration pneumonia</li> <li>▪ On established intermittent renal support</li> <li>▪ Requiring respiratory physiotherapy to treat or prevent respiratory failure</li> <li>▪ Requiring frequent (&gt; 2x per day) Peak Expiratory Flow rate measurement for clinical reasons</li> </ul>
<b>Patients requiring critical care outreach service support</b>	<ul style="list-style-type: none"> <li>▪ Abnormal vital signs but not requiring a higher level of critical care</li> <li>▪ Risk of clinical deterioration and potential need to step up to level 2 care. Patients fulfill the medium 'risk' category as defined by NICE guidance 50</li> </ul>

Level 2 Criteria	Examples
<b>Patients needing pre-operative optimisation</b>	<ul style="list-style-type: none"> <li>▪ Cardiovascular, renal or respiratory optimisation required prior to surgery. (Invasive monitoring inserted to assist optimisation (arterial line and CVP as an minimum))</li> </ul>
<b>Patients needing extended post-operative care</b>	<ul style="list-style-type: none"> <li>▪ Immediate care following major elective surgery</li> <li>▪ Emergency surgery in unstable or high risk patients</li> <li>▪ Where there is a risk of postoperative complications or a need for enhanced interventions and monitoring</li> </ul>

<b>Patients stepping down to level 2 care from level 3</b>	<ul style="list-style-type: none"> <li>▪ Requiring a minimum of hourly observations</li> <li>▪ At risk of deterioration and requiring level 3 care again</li> </ul>
<b>Patients receiving single organ support</b>  (exceptions: Basic Respiratory and Basic Cardiovascular support occurring simultaneously without any other organ support should be considered as level 2 and Advanced Respiratory Support alone is Level 3)	
<b>Patients receiving basic respiratory support</b>  (NB When Basic Respiratory and Basic Cardiovascular support are provided at the same time during the same critical care spell and no other organ support is required, the care is considered to be level 2)	Indicated by one or more of the following: <ul style="list-style-type: none"> <li>• Mask/hood CPAP or mask / hood Bi-level positive airway pressure (non-invasive ventilation)</li> <li>• Patients who are intubated to protect the airway but needing no ventilatory support</li> <li>• CPAP via a tracheostomy</li> <li>• More than 50% oxygen delivered by face mask. (Note, more than 50% has been chosen to identify the more seriously ill hospital patients in a hospital). Short term increases in FiO<sub>2</sub> to facilitate procedures such as transfers or physiotherapy do not qualify</li> <li>• Close observation due to the potential for acute deterioration to the point of needing advanced respiratory support (<i>e.g. severely compromised airway or deteriorating respiratory muscle function</i>)</li> <li>• Physiotherapy or suction to clear secretions at least 2 hourly, whether via tracheostomy, minitracheostomy or in the absence of an artificial airway</li> <li>• Patients who are recently (within 24 hours) extubated after a period (greater than 24 hours) of mechanical ventilation via endotracheal tube.</li> <li>• NB The presence of a tracheostomy used for long term airway access only, does not qualify for basic respiratory support</li> </ul>
<b>Patients receiving Basic Cardiovascular support</b>  (NB When Basic Respiratory and Basic Cardiovascular support are provided at the same time during the same critical care spell and no other organ support is required, the care is considered to be level 2)	Indicated by one or more of the following: <ul style="list-style-type: none"> <li>• Use of a CVP line for monitoring of CVP and/or provision of central venous access to deliver titrated fluid to treat hypovolaemia</li> <li>• Use of an arterial line for monitoring the arterial pressure and/or sampling of arterial blood</li> <li>• Single intravenous vasoactive drug used to support or control arterial pressure, cardiac output or organ perfusion</li> <li>• Single/multiple intravenous rhythm controlling drug(s) to support or control cardiac arrhythmias</li> </ul>
<b>Patients receiving Advanced Cardiovascular support</b>  (NB Basic Cardiovascular support will frequently occur prior to Advanced Cardiovascular support and should not lead to both Advanced Cardiovascular support and Basic Cardiovascular support being recorded at the same calendar day. Advanced Cardiovascular support supersedes Basic Cardiovascular support where this occurs)	Indicated by one or more of the following: <ul style="list-style-type: none"> <li>• Multiple intravenous vasoactive and/or rhythm controlling drugs when used simultaneously to support or control arterial pressure, cardiac output or organ/tissue perfusion (<i>e.g. inotropes, amiodarone, nitrates</i>) <i>To qualify for advanced support status, at least one drug needs to be vasoactive.</i></li> <li>• Continuous observation of cardiac output and derived indices (e.g. pulmonary artery catheter, lithium dilution, pulse contour analyses oesophageal Doppler, impedance and conductance methods)</li> <li>• Insertion of a temporary cardiac pacemaker (criteria valid for each day of therapeutic connection to a functioning external pacemaker unit)</li> </ul>
<b>Patients receiving Renal support</b>	Indicated by: <ul style="list-style-type: none"> <li>• Acute renal replacement therapy (e.g. haemodialysis, haemofiltration etc) or</li> </ul>

	<ul style="list-style-type: none"> <li>• Provision of renal replacement therapy to a chronic renal failure patient who is requiring other acute organ support in a critical care bed</li> </ul>
<b>Patients receiving Neurological support</b>	<p>Indicated by one or more of the following:</p> <ul style="list-style-type: none"> <li>• Central nervous system depression sufficient to prejudice the airway and protective reflexes, <u>excluding that caused by sedation prescribed to facilitate mechanical ventilation or poisoning (e.g. deliberate or accidental overdose, alcohol, drugs etc)</u></li> <li>• Invasive neurological monitoring or treatment e.g. ICP, jugular bulb sampling, external ventricular drain</li> <li>• Continuous intravenous medication to control seizures and/or continuous cerebral monitoring</li> <li>• Therapeutic hypothermia using cooling protocols or devices.</li> </ul>
<b>Patients receiving dermatological support</b>	<p>Indicated by one or more of the following:</p> <ul style="list-style-type: none"> <li>• Patients with major skin rashes, exfoliation or burns. (<i>e.g. greater than 30% body surface area affected</i>)</li> <li>• Use of complex dressings (<i>e.g. large skin area greater than 30% of body surface area, open abdomen, vacuum dressings, or large trauma such as multiple limb or limb and head dressings</i>)</li> </ul>

Level 3 Criteria	Examples
<p><b>Patients receiving Advanced Respiratory Support alone</b></p> <p>(NB Basic Respiratory support will frequently occur prior to Advanced Cardiovascular support and should not lead to both Advanced Cardiovascular support and Basic Cardiovascular support being recorded at the same calendar day. Advanced Cardiovascular support supersedes Basic Cardiovascular support where this occurs)</p>	<p>Indicated by one or more of the following:</p> <ul style="list-style-type: none"> <li>• Invasive mechanical ventilatory support applied via a trans-laryngeal tracheal tube or applied via a tracheostomy</li> <li>• Bi-level positive airway pressure via a trans-laryngeal tracheal tube or applied via a tracheostomy</li> <li>• CPAP via a trans-laryngeal tracheal tube</li> <li>• Extracorporeal respiratory support</li> </ul>
<p><b>OR</b></p> <p><b>Patients receiving a minimum of 2 organs supported</b></p> <p>(NB Basic Respiratory and Basic Cardiovascular support do not count as 2 organs if they occur simultaneously (see above under Level 2 care) but will count as Level 3 if another organ is supported at the same time)</p>	<p>Examples:</p> <ul style="list-style-type: none"> <li>• Basic Respiratory and Neurological support</li> <li>• Basic Respiratory and Hepatic support</li> <li>• Basic Respiratory and Renal support</li> <li>• Basic Cardiovascular and Hepatic support</li> <li>• Basic Cardiovascular and Renal support</li> <li>• Advanced Cardiovascular and Renal support</li> <li>• Advanced Cardiovascular and Hepatic support</li> <li>• Advanced Cardiovascular and Neurological support</li> </ul>

## APPENDIX III – KEY STANDARDS AND PRINCIPLES

### AIMS FOR EDUCATIONAL CENTRES:

Educational programmes should be aligned to achieve service requirements which underpin NHS strategic goals

Embrace the concepts of quality and progressive innovation in learning, teaching and assessment

Programmes should be developed using a blended learning approach

All programmes should disseminate current research and stimulate practice development

A non-discriminatory learning environment should be provided for all learners

The learning experience should enhance skills and theoretical knowledge

All programmes should support and encourage student potential

Programmes should be developed and delivered by a combination of individuals who are academically and clinically credible

### PROGRAMME LEARNING OUTCOMES

On successful completion of this module you will be able to:

Critically appraise information to support decision making

Demonstrate the application of skills and theoretical knowledge to clinical practice

Evaluate and apply current research to practice

Communicate using a wide range of techniques to a wide range of audiences

Assess, plan, implement and evaluate care to a safe and competent level

Be flexible in your approach to caring for critically ill patients to meet their constantly changing needs

Demonstrate an effective contribution to the multi-disciplinary team

Use initiative within your scope of professional and personal responsibility

Use reflection to develop personal practice

Provide evidence of ongoing professional development and life long learning

### THE PROGRAMME OF STUDY SHOULD PREPARE LEARNERS TO DEMONSTRATE:

Knowledge of anatomy and physiology

Ability to recognise health abnormalities

Competence to assess, plan, implement and evaluate care for patients with health abnormalities

Knowledge relating to pharmacology and pharmacokinetics

Knowledge of investigations and application of results

Knowledge of treatment modalities

Safe and effective use of equipment

Competence to manage an emergency situation

*All of the above elements should be applied to the following 6 systems:*

- Respiratory system
- Cardiovascular system
- Renal System
- Gastrointestinal System (inclusive of liver and biliary systems)
- Neurological System
- Integumentary System
- 

#### IN RELATION TO MAINTAINING A SAFE ENVIRONMENT THE STUDENT WILL DEMONSTRATE:

Knowledge of infection prevention and control

Safe transfer and retrieval of patients

Risk assessment and risk management

Knowledge of health & safety and security

#### IN RELATION TO PAIN MANAGEMENT THE STUDENT WILL DEMONSTRATE:

Knowledge of anatomy and physiology

Ability to recognise health abnormalities

Competence to assess, plan, implement and evaluate care for patients with health abnormalities

Knowledge relating to pharmacology and pharmacokinetics

Knowledge of investigations and application of results

Knowledge of treatment modalities

Safe and effective use of equipment

Competence to manage an emergency situation

## IN RELATION TO COMMUNICATION AND TEAMWORK THE STUDENT WILL DEMONSTRATE

Knowledge of the importance of team working

Participation in effective team working

The need for clear and accurate documentation

Effective communication techniques and identify barriers to communication

## IN RELATION TO LAW AND ETHICS THE STUDENT WILL DEMONSTRATE:

The legal responsibility of their role

Knowledge of ethical principles

Knowledge of Acts of Parliament that influence care delivery

Principles of consent and mental capacity

Knowledge of withdrawal of treatment, end of life care, DNAR and advanced directives

Awareness of the need for defensible documentation

Knowledge of professional responsibilities

Knowledge of ethical dilemmas

## IN RELATION TO HOLISTIC CARE THE STUDENT WILL DEMONSTRATE:

Psychosocial care of the patient and their family

The ability to manage bereavement and sudden loss

The ability to provide essential physical care

The ability to maintain privacy and dignity

*Compiled by the Critical Care National Network Nurse Leads (CC3N) Education Sub-Group*

## APPENDIX IV – BENEFITS REALISATION

Project Name, Stakeholders and Duration	Output/End Product	Final Outcome	Benefit/Impact	Benefit evidence/measurement
Critical for Care	Produce a set of competences across CC patient pathways	Right staff receive right training in right place	Training pathways aligned with clinical pathways	Appropriate education and training is commissioned and rolled out across Cheshire & Mersey
CMCCN Skills for Health NHS Northwest Commissioners NW Specialist and Collaborative commissioners HEIs Critical Care medical staff Critical care nursing staff AHPs working in critical care Acute Trust executive teams Critical care service providers	Produce a recognised, transferable standard for E&T in CC	Appropriate breadth and depth of E&T Increased innovation across settings to meet patient needs	Needs of the service determine content, nature and delivery of training Flexible delivery, use of simulation centres, collaboration with HEIs	Appropriate training is accessed by all staff for whom a need has been identified
12 months	Produce an E&T training programme: flexible multi-professional transferable HEI and workplace	Work Based Learning delivered by Multi Disciplinary Team  Competent staff	Equitable, efficient and consistent individualised patient care	Improved clinical outcomes Reduced clinical incidents Reduced length of stay



Skills for Health has lead responsibility for developing National Occupational Standards (NOS) for the health sector. National Occupational Standards (NOS), more commonly known as competences, are relevant to the whole of the UK and apply to the healthcare sector in its entirety, rather than exclusively to the NHS. All Skills for Health competences are UK Commission for Employment and Skills (UKCES) approved National Occupational Standards.

Skills for Health works collaboratively with the relevant stakeholders, practitioners and experts to write NOS, which describe performance as outcomes of a person's work and set out the required knowledge and understanding required to underpin that performance.

NOS are developed to meet rigorous internal quality systems and the NOS Quality Criteria set down by the UKCES. Once the internal quality assurance requirements and the NOS Quality Criteria have been met, the draft NOS are submitted to UKCES who are responsible for approving all Sector Skills Councils' National Occupational Standards. Once approved they become National Occupational Standards (NOS), and are used across the four countries; England, Northern Ireland, Scotland and Wales.

NOS focus on what the person needs to be able to do, relating to individual performance, as well as what they must know and understand to work effectively. They can be grouped together into frameworks, for example, they can be specifically relevant to a particular condition, or can be grouped in other ways, such as qualification or role.

The template used by Skills for Health for presenting NOS has evolved over the years and is reviewed and updated based on continuing evaluation. NOS have a review date and are reviewed by Skills for Health on a project basis.

NOS could be reviewed because:

- Feedback has been received that a competence no longer reflects current practice.
- Where the competence is identified as being part of the 'scope' of a new project the National Reference Group may decide that the National Occupational Standards (NOS) needs to be updated.

### USE OF NATIONAL OCCUPATIONAL STANDARDS

National Occupational Standards are designed to allow people to assess and be assessed against them. In order to do that, they must be:

- a single task
- able to be undertaken by one individual

- measurable
- observable.

NOS define what has to be done, not who does it.

They describe:

- what the required standard is for a particular activity
- the performance criteria against which competence can be assessed
- the underpinning knowledge that is needed.

Each NOS is currently written in a set format which includes:

- Title - active tense with a range of context/conditions
- Scope/overview - further defines range
- Performance criteria - measures of successful performance (the minimum standard required)
- Knowledge and understanding required to underpin the performance criteria

National Occupational Standards (NOS) are a tool to help individuals, organisations and training providers to improve performance. The use of NOS related to the requirements of the care pathways and the service user when designing education and training ensures education provision is relevant to employer and workforce needs.

NOS can be used to:

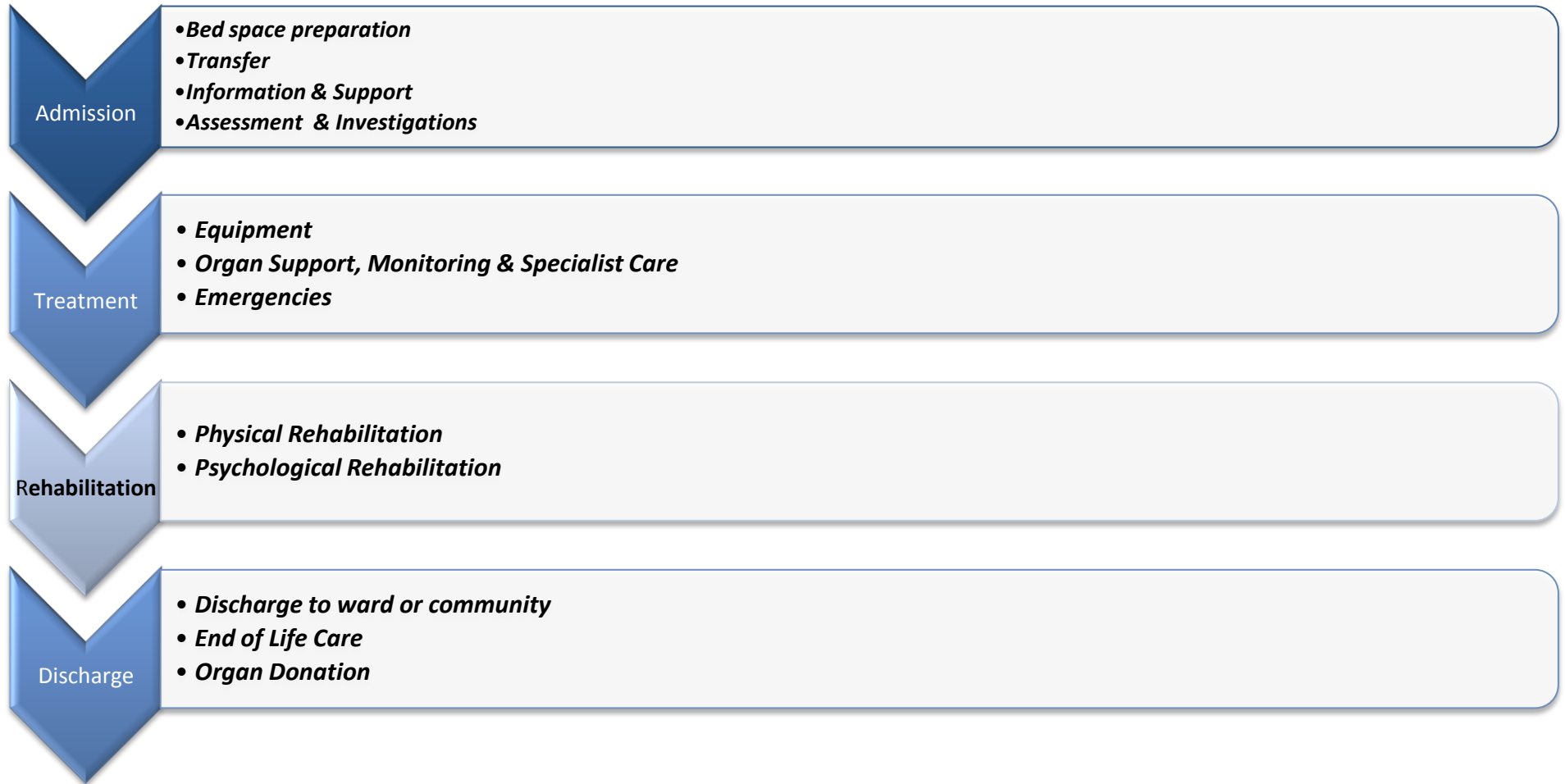
- Inform the development of national qualifications
- Design tailored training packages and assess relevance and effectiveness
- Define learning outcomes and assessment criteria
- Provide clear goals for structured learning.

In addition, evidence used to demonstrate competence against a National Occupational Standard (NOS) can also be used to demonstrate how an individual meets their NHS KSF profile.

Each NOS has a code for identification, e.g. Gen22, the full text of each NOS can be found at [www.skillsforhealth.org.uk](http://www.skillsforhealth.org.uk)

*All National Occupational Standards/ competences available through the Skills for Health website are the intellectual property of Skills for Health and are protected by relevant copyright legislation. Any use of the National Occupational Standards/ competences within any publications without express permission of Skills for Health and relevant references to the originator could be viewed a breach of copyright. Amending Skills for Health National Occupational Standards/ competences in any way is not permissible without a complete change to the text.*

CLINICAL ELEMENTS



**ELEMENTS OF CARE ON THE CRITICAL CARE  
PATHWAY**

**ADMISSION**

**TRANSFER**

**INFORMATION, ADVICE AND  
SUPPORT FOR PATIENTS AND FAMILIES**

**GENERIC**

**RESPIRATORY**

**CARDIO-VASCULAR**

**RENAL & HOMEOSTASIS**

**NEUROLOGICAL**

**MEDICATION**

**NUTRITION**

**SPECIALISED REHABILITATION**

**DISCHARGE**

**END OF LIFE CARE**

**Skills and Ability to:**

***Set up bed space***

CHS224: Set up equipment to monitor physiological function

GEN82: Check, connect and disconnect medical gas cylinders and outlets

DEC4: Prepare re-usable medical devices for sterilization

DEC5: Carry out sterilization and disinfection of re-useable medical devices

GEN6: Manage environments and resources for use during healthcare activities

CHS124: Manage and support the progress of individuals through patient pathways

HCS2: Preparation of products for use within healthcare activities

***Transfer to monitoring equipment***

CHS166: Fit healthcare equipment, medical devices, assistive technology, or products to meet individual's clinical needs

CHS22: Perform intravenous cannulation

HSC224: Observe, monitor and record the condition of individuals

EUSC49: Provide care for individuals as they recover from interventions

CHS166: Maintain use of medical devices to assist organ or system function

***ELEMENTS OF CARE ON THE CRITICAL CARE  
PATHWAY***

***ADMISSION***

***TRANSFER***

***INFORMATION, ADVICE AND  
SUPPORT FOR PATIENTS AND FAMILIES***

***GENERIC***

***RESPIRATORY***

***CARDIO-VASCULAR***

***RENAL & HOMEOSTASIS***

***NEUROLOGICAL***

***MEDICATION***

***NUTRITION***

***SPECIALISED REHABILITATION***

***DISCHARGE***

***END OF LIFE CARE***

**To Include:**

Referral policies

Appropriate equipment and products for use in the critical care bed space and their application

Potential risks and their management

Appropriate health and safety and infection prevention measures

Continuous ECG monitoring, NIBP and arterial BP monitoring.

Advanced haemodynamic monitoring e.g. cardiac output monitoring, CVP monitoring, urine output monitoring, fluid balance monitoring, electrolyte monitoring

National guidelines for care of the unconscious patient

Measure and interpret the monitoring established above

Recognise issues outside sphere of competence

Take action to prevent deterioration

**ELEMENTS OF CARE ON THE CRITICAL CARE  
PATHWAY**

**ADMISSION**

**TRANSFER**

**INFORMATION, ADVICE AND  
SUPPORT FOR PATIENTS AND FAMILIES** EC23:

**GENERIC**

**RESPIRATORY**

**CARDIO-VASCULAR**

**RENAL & HOMEOSTASIS**

**NEUROLOGICAL**

**MEDICATION**

**NUTRITION**

**SPECIALISED REHABILITATION**

**DISCHARGE**

**END OF LIFE CARE**

**Skills and Ability to:**

***Intra-hospital***

PCS23: Assist in the transfer and positioning of patients within the perioperative environment

PCS1: Prepare for and transport patients to, within and from the perioperative environment

GEN79: Coordinate the progress of individuals through care pathways

CHS124: Manage and support the progress of individuals through patient pathways

EUSC50: Monitor and maintain the status of an individual during their post intervention transportation

***Inter-hospital***

EC23: Evacuate and transport individuals who require emergency transport to suitable locations for treatment/intervention/care

**ELEMENTS OF CARE ON THE CRITICAL CARE  
PATHWAY**

**ADMISSION**

**TRANSFER**

**INFORMATION, ADVICE AND  
SUPPORT FOR PATIENTS AND FAMILIES**

**GENERIC**

**RESPIRATORY**

**CARDIO-VASCULAR**

**RENAL & HOMEOSTASIS**

**NEUROLOGICAL**

**MEDICATION**

**NUTRITION**

**SPECIALISED REHABILITATION**

**DISCHARGE**

**END OF LIFE CARE**

**To Include:**

Assessment of patients requiring:

- Airway management
- CV support
- Monitoring
- Fluid therapy
- Pharmacological requirements
- Psychological support

Locate, test, and safely set up monitoring/transfer equipment:

- Alarm testing
- Prepare electromechanical devices
- Supplementary gases
- Transportation
- Optimum level of stability prior to transfer

Transfer policy:

- Local
- Network
- National e.g. ICS

Transfer documentation:

- Care records
- Transfer records e.g. ICBIS

Transfer process:

- Emergency admissions
- Elective admissions
- To/from other hospital – include independent sector

**ELEMENTS OF CARE ON THE CRITICAL CARE  
PATHWAY**

**ADMISSION**

**TRANSFER**

**INFORMATION, ADVICE AND  
SUPPORT FOR PATIENTS AND FAMILIES**

**GENERIC**

**RESPIRATORY**

**CARDIO-VASCULAR**

**RENAL & HOMEOSTASIS**

**NEUROLOGICAL**

**MEDICATION**

**NUTRITION**

**SPECIALISED REHABILITATION**

**DISCHARGE**

**END OF LIFE CARE**

**Skills and Ability to:**

**Patients**

MH1: Promote effective communication and relationships with people who are troubled or distressed

HSC31: Promote effective communication with, for and about individuals

HSC369: Support individuals with specific communication needs

HSC370: Support individuals to communicate using technology

**Family/Carer**

CHS48: Communicate significant news to individuals

CHS95: Explain to the family the patient's condition and likely death

CHS94: Explain to the family the patient's brain stem death

**Colleagues**

HSC21: Communicate with, and complete records for individuals

CHS126: Conduct handover between healthcare personnel

CHS104: Brief the team for an individual's intervention



**ELEMENTS OF CARE ON THE CRITICAL CARE  
PATHWAY**

**ADMISSION**

**TRANSFER**

**INFORMATION, ADVICE AND  
SUPPORT FOR PATIENTS AND FAMILIES**

**GENERIC**

**RESPIRATORY**

**CARDIO-VASCULAR**

**RENAL & HOMEOSTASIS**

**NEUROLOGICAL**

**MEDICATION**

**NUTRITION**

**SPECIALISED REHABILITATION**

**DISCHARGE**

**END OF LIFE CARE**

**To Include:**

The ability to communicate with the:

- Unconscious patient
- Patient with trachy

Deflating cuff/use of adjuncts/fenestrated tubes)

Interpretation of non-verbal cues in sedated patient

Care of the unconscious patient guidelines – Act as advocate

Enable patients and families to understand pt condition and treatment including need for assessment/investigations,

Interventions/treatments

and their likely timeframes; rationale for treatment and possible side effects

Accurate Critical care records

- CCMDS, PbR
- ICBIS
- ICNARC

Audit

- Patient flow
- Levels of care
- benchmarking

Defensible documentation

Mental Capacity Act

Confidentiality

FOI

Data Protection

Handover

Physical and psychological barriers)

Tools:

- alphabet boards
- picture boards
- word cards

Patient diaries

## **ELEMENTS OF CARE ON THE CRITICAL CARE PATHWAY**

### **ADMISSION**

### **TRANSFER**

### **INFORMATION, ADVICE AND SUPPORT FOR PATIENTS AND FAMILIES**

### **GENERIC**

- **Consent**
- **Assessment**
- **Investigations**
- **Tissue Viability**
- **Infection Control**
- **Treatment**

### **RESPIRATORY**

### **CARDIO-VASCULAR**

### **RENAL & HOMEOSTASIS**

### **NEUROLOGICAL**

### **MEDICATION**

### **NUTRITION**

### **SPECIALISED REHABILITATION**

### **DISCHARGE**

### **Skills and Ability to:**

CHS167: Obtain valid consent or authorization

CHS168: Obtain a patient history

GEN39: Contribute to effective multidisciplinary team working

### **Assessments**

CHS39: Assess an individual's health status

CHS4: Undertake tissue viability risk assessment for individuals

### **Investigations**

CHS19: Undertake physiological measurements

CHS25: Carry out blood collection from fixed or central lines

CHS132: Obtain venous blood samples

CHS24: Carry out arterial puncture and collect arterial blood

CHS192: Perform standard tests using an automated analyser

CHS185: Perform basic specimen/sample preparation

CHS186: Store specimens and samples

PCS10: Carry out delegated activities in receiving, handling and dispatching clinical specimens

PCS17: Receive and handle clinical specimens within the sterile field

CHS83: Interpret the findings of healthcare investigations

CHS40: Establish a diagnosis of an individual's health condition (level 8)

DYS1: Undertake protocol guided swallow screening / assessments

### **Tissue Viability**

CHS12: Undertake treatments and dressings related to the care of lesions and wounds

CHS13: Undertake wound drainage care

CHS133: Remove wound drains

CHS5: Undertake agreed pressure area care

CHS11: Undertake personal hygiene for individuals unable to care for themselves

### **Infection Control**

IPC2: Perform hand hygiene to prevent the spread of infection

IPC1: Minimise the risks of spreading infection by cleaning and maintaining environments in health and social care settings

IPC3: Clean and remove spillages of blood and other body fluids

IPC5: Minimise the risks of exposure to blood-borne infections while providing care

IPC6: Use personal protective equipment to prevent the spread of infection

### **Treatment**

CHS41: Determine a treatment plan for an individual

CHS225: Implement a treatment plan

**ELEMENTS OF CARE ON THE CRITICAL CARE PATHWAY**

**ADMISSION**

**TRANSFER**

**INFORMATION, ADVICE AND SUPPORT FOR PATIENTS AND FAMILIES**

**GENERIC**

- **Consent**
- **Assessment**
- **Investigations**
- **Tissue Viability**
- **Infection Control**
- **Treatment**

**RESPIRATORY**

**CARDIO-VASCULAR**

**RENAL & HOMEOSTASIS**

**NEUROLOGICAL**

**MEDICATION**

**NUTRITION**

**SPECIALISED REHABILITATION**

**DISCHARGE**

**END OF LIFE CARE**

**To Include**

Parent team referral

Referrals to other specialities and agencies

History from patient

History from relatives

**Assessment**

In depth ABCDE e.g. MAP, CVP Airway, Breathing, (resp rate, effort, lung fields, sats) Circulation (HR, rhythm, BP, pulse characters/volume) capillary refill time, periphery and central pulse.

**Investigations**

Specific POC tests

Local protocols for investigations and reporting

Monitor arterial blood gases and acid/base status via arterial line

Indications for obtaining arterial blood sample

Complications of blood gas sampling

H&S when undertaking sampling

Appropriate equipment for obtaining blood samples

Monitor arterial blood gases and acid/base status via arterial line

**Documentation**

Maintain accurate, comprehensive and timely documentation

Understand

- The principles of defensible documentation
- The role of the healthcare professional as the patient's advocate

Take and interpret thorough history, taking third part information where possible, and assess mental capacity

**ELEMENTS OF CARE ON THE CRITICAL CARE  
PATHWAY**

**ADMISSION**

**TRANSFER**

**INFORMATION, ADVICE AND  
SUPPORT FOR PATIENTS AND FAMILIES**

**GENERIC**

**RESPIRATORY**

- **Assessment**
- **Investigations**
- **Treatment**
- **Emergencies**

**CARDIO-VASCULAR**

**RENAL & HOMEOSTASIS**

**NEUROLOGICAL**

**MEDICATION**

**NUTRITION**

**SPECIALISED REHABILITATION**

**DISCHARGE**

**END OF LIFE CARE**

**Skills and Ability to:**

CHS224: Set up equipment to monitor physiological function

PCS2: Contribute to the safe use of medical devices in the perioperative environment

CHS78: Administer oxygen safely and effectively

HCS\_RESP12: Establish patients on acute non-invasive ventilatory support

CHS67: Support individuals with long term conditions to manage their respiratory function

EUSC26: Care for the individual within the critical care environment

EUSC25: Monitor the individual within the critical care environment

CHS6: Move and position individuals

GEN39: Contribute to effective multidisciplinary team working

CHS163: Manage Emergency Situations

**ELEMENTS OF CARE ON THE CRITICAL CARE PATHWAY**

ADMISSION

TRANSFER

INFORMATION, ADVICE AND SUPPORT FOR PATIENTS AND FAMILIES

GENERIC

**RESPIRATORY**

- Assessment
- Investigations
- Treatment
- Emergencies

CARDIO-VASCULAR

RENAL & HOMEOSTASIS

NEUROLOGICAL

MEDICATION

NUTRITION

SPECIALISED REHABILITATION

DISCHARGE

END OF LIFE CARE

**To Include:**

A&P of respiratory system

Take and interpret thorough respiratory history, taking third party information where possible, and assess mental capacity

Signs and symptoms of respiratory disease

Disease Processes

Treatments/Management

Implications of the MCA and how it applies to the ventilated patient

Advocates for the ventilated patient

**Assessment**

Indications for respiratory assessment

Assess secretion production

Assess patient's respiratory pattern

Assess effectiveness of O2 therapy

Signs and symptoms of:

- Tachypnea
- Bradypnoea
- Orthopnoea
- Cheyne-stokes
- Kussmaul
- Hyperventilation

Identify signs and symptoms of pneumothorax and take appropriate action

**Investigations**

Indications for respiratory investigations

Auscultate for lung sounds

- Crepitations
- Wheeze
- Rhonchi
- Hyper-resonance
- pCO<sub>2</sub>
- pH
- Base excess
- Actual HCO

**ELEMENTS OF CARE ON THE CRITICAL CARE PATHWAY**

**ADMISSION**

**TRANSFER**

**INFORMATION, ADVICE AND SUPPORT FOR PATIENTS AND FAMILIES**

**GENERIC**

**RESPIRATORY**

- **Assessment**
- **Investigations**
- **Treatment**
- **Emergencies**

**CARDIO-VASCULAR**

**RENAL & HOMEOSTASIS**

**NEUROLOGICAL**

**MEDICATION**

**NUTRITION**

**SPECIALISED REHABILITATION**

**DISCHARGE**

Understand

- respiratory acidosis
- respiratory alkalosis
- Metabolic acidosis
- Metabolic alkalosis

The time frame for emergency and follow-on investigations, interventions and treatments

How to initiate emergency respiratory treatment

**Treatment**

Management options for respiratory conditions

Identify and assemble, check functionality and safety:

- Nasal cannulae
- Simple face mask
- Non-rebreathing mask
- Venturi mask
- Tracheostomy mask
- H.M.E Filters
- Cold water nebulisers
- Heated water systems
- T-piece
- CPAP circuit
- NIV
- Ventilator

Good technique when applying equipment

Trouble shoot problems and implement actions

Awareness of importance of monitoring equipment

Safe disposal of used equipment

- Procedure trolley
- Chest drain apparatus
- Suction apparatus

Oxygen therapy

- Signs and symptoms of O2 toxicity
- Complications of O2 therapy
- H&S of delivery O2 therapy

Humidification

**ELEMENTS OF CARE ON THE CRITICAL CARE  
PATHWAY**

**ADMISSION**

**TRANSFER**

**INFORMATION, ADVICE AND  
SUPPORT FOR PATIENTS AND FAMILIES**

**GENERIC**

**RESPIRATORY**

- **Assessment**
- **Investigations**
- **Treatment**
- **Emergencies**

**CARDIO-VASCULAR**

**RENAL & HOMEOSTASIS**

**NEUROLOGICAL**

**MEDICATION**

**NUTRITION**

**SPECIALISED REHABILITATION**

**DISCHARGE**

**END OF LIFE CARE**

- Rationale for artificial humidification
- Complications of artificial humidification
- Effectiveness of different methods of humidification
- Physiological mechanism of humidification

**Hand ventilation**

- Indications for NIV/weaning from NIV
- Principles of CPAP/NIV
- Complications of NIV
- H&S when delivering NIV

**Artificial ventilation**

- Indications for artificial ventilation/weaning from artificial ventilation
- Principles and basic physiological effects of artificial ventilation
- Complications of artificial ventilation
- H&S when delivering artificial ventilation

**Ventilation care bundle**

**Tracheostomy**

- Indications for tracheostomy
- Theory and rationale for different tracheostomy tubes
- Complications of tracheostomies
- H&S when undertaking tracheostomy
- Tracheostomy care bundle

**Adjust support to maintain effective respiratory function**

**Airway adjuncts/manoeuvres**

**SDDT**

**Endotracheal**

- Indications for ET intubation
- Criteria for ET intubation
- Complications of ET tubes
- H&S when undertaking ET intubation

**Tracheal intubation**

**Pulse oximetry**

- Theory and limitations of pulse oximetry
- Indications for pulse oximetry monitoring
- H&S when undertaking pulse oximetry

**ELEMENTS OF CARE ON THE CRITICAL CARE  
PATHWAY**

**ADMISSION**

**TRANSFER**

**INFORMATION, ADVICE AND  
SUPPORT FOR PATIENTS AND FAMILIES**

**GENERIC**

**RESPIRATORY**

- **Assessment**
- **Investigations**
- **Treatment**
- **Emergencies**

**CARDIO-VASCULAR**

**RENAL & HOMEOSTASIS**

**NEUROLOGICAL**

**MEDICATION**

**NUTRITION**

**SPECIALISED REHABILITATION**

**DISCHARGE**

**END OF LIFE CARE**

Identify

- Normal waveform
- Abnormal waveform
- Normal values
- Abnormal values

**Suctioning**

- Indications for suctioning
- Benefits/issues with closed suction/ standard suction
- Contra-indications and complications of suctioning procedures
- Causes of infection through suctioning, effect on patient

**Chest Drains**

- H&S when undertaking chest drain
- Emergency treatment of inadvertent removal of chest drain
- Indications for chest drain insertion/removal
- Concept of chest drain use
- Complication associated with chest drain
- H&S when undertaking chest drain
- Emergency treatment of inadvertent removal of chest drain

**Positioning**

- Position patient for procedures
- Proning
- Bariatric patients



**ELEMENTS OF CARE ON THE CRITICAL CARE  
PATHWAY**

**ADMISSION**

**TRANSFER**

**INFORMATION, ADVICE AND  
SUPPORT FOR PATIENTS AND FAMILIES**

**GENERIC**

**RESPIRATORY**

**CARDIO-VASCULAR**

- **Assessment**
- **Investigations**
- **Treatment**
- **Emergencies**

**RENAL & HOMEOSTASIS**

**NEUROLOGICAL**

**MEDICATION**

**NUTRITION**

**SPECIALISED REHABILITATION**

**DISCHARGE**

**END OF LIFE CARE**

**Skills and Ability to:**

CHS224: Set up equipment to monitor physiological function

PCS2: Contribute to the safe use of medical devices in the critical care environment

CHD HB1: Recognise indications of heart conditions and take appropriate action

CHS130: Perform routine Electrocardiograph (ECG) procedures

EUSC25: Monitor the individual within the critical care environment

CHS101: Organise the collection and receipt of blood/blood products for transfusion

CHS102: Prepare to administer a transfusion of blood/blood products

CHS103: Administer a transfusion of blood/blood products

EUSC20: Use pre-planned methods to manage blood loss

EUSC26: Care for the individual within the critical care environment

CHS163: Manage Emergency Situations

**ELEMENTS OF CARE ON THE CRITICAL CARE  
PATHWAY**

**ADMISSION**

**TRANSFER**

**INFORMATION, ADVICE AND  
SUPPORT FOR PATIENTS AND FAMILIES**

**GENERIC**

**RESPIRATORY**

**CARDIO-VASCULAR**

- **Assessment**
- **Investigations**
- **Treatment**
- **Emergencies**

**RENAL & HOMEOSTASIS**

**NEUROLOGICAL**

**MEDICATION**

**NUTRITION**

**SPECIALISED REHABILITATION**

**DISCHARGE**

**END OF LIFE CARE**

**To Include:**

A&P of the heart and the electrical conduction system through it

A&P related to vascular system

Take and interpret thorough CV history, taking third part information where possible, and assess mental capacity

Rationale for cardiac monitoring

Causes of poor cardiac monitoring readings

Procedures in the event of equipment failure

Indicators for disconnecting cardiac monitoring

Ethical Issues – DNAR

Disease processes

Treatment/management

**Assessment**

Indications for CV assessment

Recognise normal and abnormal rhythms including:

- Sinus rhythm
  - Atrial fibrillation
  - Nodal rhythm
  - SVT
  - 1<sup>st</sup> degree heart block
  - 2<sup>nd</sup> degree heart block
  - Complete heart block
- Recognise life threatening arrhythmias and take action
- Ventricular fibrillation
  - Ventricular tachycardia
  - Asystole
  - Profound bradycardia

**Investigations**

pO<sub>2</sub>

pCO<sub>2</sub>

pH

Base excess

Actual HCO<sub>3</sub>

**ELEMENTS OF CARE ON THE CRITICAL CARE PATHWAY**

ADMISSION

TRANSFER

INFORMATION, ADVICE AND SUPPORT FOR PATIENTS AND FAMILIES

GENERIC

RESPIRATORY

CARDIO-VASCULAR

- Assessment
- Investigations
- Treatment
- Emergencies

RENAL & HOMEOSTASIS

NEUROLOGICAL

MEDICATION

NUTRITION

SPECIALISED REHABILITATION

DISCHARGE

END OF LIFE CARE

Understand

- respiratory acidosis
- respiratory alkalosis
- Metabolic acidosis
- Metabolic alkalosis
- 12 lead ECG

**Emergencies**

The time frame for emergency and follow-on investigations, interventions and treatments

How to initiate emergency respiratory treatment

Emergency treatment of air embolus

Emergency treatment of venous air embolus

Preparation:

- Patient/site
- Aseptic
- Trolley, cannulae, solutions
- Transducer/monitoring line

Establish airway

- Chin lift/jaw thrust
- Oropharyngeal airway
- Nasopharyngeal airway
- Bag-valve-mask

Correct defibrillation

**Equipment**

Identify and assemble, check functionality and safety:

- 12 lead ECG
- Arterial pressure line
- Central venous pressure line
- Pulmonary artery pressure line
- Telemetry equipment
- Temporary transvenous pacemaker
- Doppler equipment
- Electrical cardioversion equipment

**ELEMENTS OF CARE ON THE CRITICAL CARE  
PATHWAY**

**ADMISSION**

**TRANSFER**

**INFORMATION, ADVICE AND  
SUPPORT FOR PATIENTS AND FAMILIES**

**GENERIC**

**RESPIRATORY**

**CARDIO-VASCULAR**

- **Assessment**
- **Investigations**
- **Treatment**
- **Emergencies**

**RENAL & HOMEOSTASIS**

**NEUROLOGICAL**

**MEDICATION**

**NUTRITION**

**SPECIALISED REHABILITATION**

**DISCHARGE**

**END OF LIFE CARE**

**Treatment**

- cardiogenic, hypovolaemic and septic shock
- myocardial ischaemia, including acute coronary syndrome, ST- elevation infarction (and non ST)
- acute and chronic heart failure
- prolonged cardiac arrest
- life threatening dysrhythmias, including:
- VF, AF, SVT ventricular tachycardia,
- complete heart block, bradycardia and asystole.

Understand

- Indications for arterial pressure monitoring
- Rationale of performing Allens test
- Complications associated with arterial cannulation
- Normal and abnormal waveforms, and causes of Continuous ECG monitoring
- Indications for 12 lead ECG
- Interpret 12 lead ECG
- AVL
- AVR
- AVF
- V1, V2, V3, V4, V5, V6

Retrieve, document and store ECG recording

Non-invasive blood pressure monitoring

Invasive (arterial) blood pressure monitoring

Preparation:

- Patient/site
- Aseptic
- Trolley, cannulae, solutions
- Transducer/monitoring line

Set up and record arterial tracing

Identify arterial waveform

Manage arterial line

Discontinue safely

Central venous pressure monitoring

**ELEMENTS OF CARE ON THE CRITICAL CARE  
PATHWAY**

**ADMISSION**

**TRANSFER**

**INFORMATION, ADVICE AND  
SUPPORT FOR PATIENTS AND FAMILIES**

**GENERIC**

**RESPIRATORY**

**CARDIO-VASCULAR**

- **Assessment**
- **Investigations**
- **Treatment**
- **Emergencies**

**RENAL & HOMEOSTASIS**

**NEUROLOGICAL**

**MEDICATION**

**NUTRITION**

**SPECIALISED REHABILITATION**

**DISCHARGE**

**END OF LIFE CARE**

Preparation:

- Patient/site
- Aseptic
- Trolley, cannulae, solutions
- Transducer/monitoring line

Set up and record CVP monitoring

Identify CVP waveform

Manage CV line

Discontinue safely

Correct documentation

Understand:

- Indications for transfusion
- Observations during transfusion
- Trust policy

Reporting of adverse incidents

**ELEMENTS OF CARE ON THE CRITICAL CARE  
PATHWAY**

**ADMISSION**

**TRANSFER**

**INFORMATION, ADVICE AND  
SUPPORT FOR PATIENTS AND FAMILIES**

**GENERIC**

**RESPIRATORY**

**CARDIO-VASCULAR**

**RENAL & HOMEOSTASIS**

- **Assessment**
- **Investigations**
- **Treatment**
- **Emergencies**

**NEUROLOGICAL**

**MEDICATION**

**NUTRITION**

**SPECIALISED REHABILITATION**

**DISCHARGE**

**END OF LIFE CARE**

**Skills and ability to:**

CCO1: Assess bladder and bowel dysfunction

CHS224: Set up equipment to monitor physiological function

PCS2: Contribute to the safe use of medical devices in the perioperative environment

CHS103: Administer a transfusion of blood / blood products

HCS\_HM15: Manage anticoagulation therapy

EUSC26: Monitor the individual within the critical care environment

EUSC25: Care for the individual within the critical care environment

CHS8: Insert and secure urethral catheters and monitor and respond to the effects of urethral catheterization

CCO4: Manage suprapubic catheters

CHS10: Undertake stoma care

**Homeostasis**

CHS165: Manage fluid levels and balance

EUSC28: Extract excess fluids from an individual

PCS6: Measure and record patients' body fluid output

EUSC25: Monitor the individual within the critical care environment

CHS217: Perform point of care testing

EUSC26: Care for the individual within the critical care environment

## **ELEMENTS OF CARE ON THE CRITICAL CARE PATHWAY**

### **ADMISSION**

### **TRANSFER**

### **INFORMATION, ADVICE AND SUPPORT FOR PATIENTS AND FAMILIES**

### **GENERIC**

### **RESPIRATORY**

### **CARDIO-VASCULAR**

### **RENAL & HOMEOSTASIS**

- **Assessment**
- **Investigations**
- **Treatment**
- **Emergencies**

### **NEUROLOGICAL**

### **MEDICATION**

### **NUTRITION**

### **SPECIALISED REHABILITATION**

### **DISCHARGE**

### **END OF LIFE CARE**

### **To Include:**

A&P of the kidney and bladder

Take and interpret thorough renal history, taking third part information where possible, and show awareness of the effect of impairment of mental capacity

Indications for urethral catheter

Complications of urethral catheters

Bladder irrigation

Signs and symptoms of catheter/bladder infection

Indications for monitoring fluid balance

Physiological effects of fluid overload/loss

Indications for the use of crystalloids, colloids and blood products and associated risks/complications

Regular patient weighing re fluid management

Understand:

- Oliguria
- Anuria
- Polyuria
- Serum K levels re urine output and diuretic administration

Indications for RRT

Theory/principles of RRT

Complications of RRT

H&S re RRT delivery

Implementation of renal care bundle

### **Assessment**

Consent in critical care – unconscious patient

Identify indications for Renal assessment

Acute renal failure

Separate bladder and bowel assessment

### **Investigations**

Obtain and dispose of urine specimens

Monitor arterial blood gases and acid/base status via arterial line

Record results as per hospital protocols, report to relevant personnel and use to determine treatments required.

**ELEMENTS OF CARE ON THE CRITICAL CARE PATHWAY**

ADMISSION

TRANSFER

INFORMATION, ADVICE AND SUPPORT FOR PATIENTS AND FAMILIES

GENERIC

RESPIRATORY

CARDIO-VASCULAR

**RENAL & HOMEOSTASIS**

- Assessment
- Investigations
- Treatment
- Emergencies

NEUROLOGICAL

MEDICATION

NUTRITION

SPECIALISED REHABILITATION

DISCHARGE

END OF LIFE CARE

**Equipment**

Equipment for:

- Insertion of urethral catheter
- Fluid administration
- RRT

Safe disposal of equipment

Safe techniques and procedures

Troubleshoot problems and implement action

**Treatment**

Urgent treatments required to maintain homeostasis.

Safe techniques and procedures

Troubleshoot problems and implement actions associated with infusion of fluids, RRT, urethral catheters and urine drainage

Monitor and document response to fluid administration

Recognise overload and loss

Haemofiltration and plasma exchange

Monitor effects of:

- Blood urea and electrolytes
- Haemoglobin
- Platelets
- Coagulopathy
- Urine quality

Catheters

- Safe removal
- Relate to nephrostomy, urostomy, ileal conduit

In-depth knowledge of:

- the various types of catheter and how to select the correct one
- Haemofiltration

Temp control

post VF arrest/therapeutic

hypothermia

hyperpyrexia



**ELEMENTS OF CARE ON THE CRITICAL CARE  
PATHWAY**

**ADMISSION**

**TRANSFER**

**INFORMATION, ADVICE AND  
SUPPORT FOR PATIENTS AND FAMILIES**

**GENERIC**

**RESPIRATORY**

**CARDIO-VASCULAR**

**RENAL & HOMEOSTASIS**

- **Assessment**
- **Investigations**
- **Treatment**
- **Emergencies**

**NEUROLOGICAL**

**MEDICATION**

**NUTRITION**

**SPECIALISED REHABILITATION**

**DISCHARGE**

**END OF LIFE CARE**

**Homeostasis**

Indications for monitoring fluid balance

Physiological effects of fluid overload and loss

Indications for use of

- Crystalloids
- Colloids
- Blood products

Risk/complications of above

Weighing patients

Explain

- Oliguria
- Anuria
- Polyuria

Minimal volume of urine output

Effects on serum K levels re urine output and diuretic administration

**ELEMENTS OF CARE ON THE CRITICAL CARE  
PATHWAY**

**ADMISSION**

**TRANSFER**

**INFORMATION, ADVICE AND  
SUPPORT FOR PATIENTS AND FAMILIES**

**GENERIC**

**RESPIRATORY**

**CARDIO-VASCULAR**

**RENAL & HOMEOSTASIS**

**NEUROLOGICAL**

- **Assessment**
- **Investigations**
- **Treatment**
- **Emergencies**

**MEDICATION**

**NUTRITION**

**SPECIALISED REHABILITATION**

**DISCHARGE**

**END OF LIFE CARE**

**Skills and Ability to:**

CHS224: Set up equipment to monitor physiological function

HCS6: Perform a range of procedures to monitor/support physiological response to modify function, performance or therapy

CHS164: Manage pain relief for an individual

PCS2: Contribute to the safe use of medical devices in the perioperative environment

CHS19: Undertake physiological measurements

EUSC25: Monitor the individual within the critical care environment

EUSC26: Care for the individual within the critical care environment

## **ELEMENTS OF CARE ON THE CRITICAL CARE PATHWAY**

**ADMISSION**

**TRANSFER**

**INFORMATION, ADVICE AND SUPPORT FOR PATIENTS AND FAMILIES**

**GENERIC**

**RESPIRATORY**

**CARDIO-VASCULAR**

**RENAL & HOMEOSTASIS**

### **NEUROLOGICAL**

- **Assessment**
- **Investigations**
- **Treatment**
- **Emergencies**

**MEDICATION**

**NUTRITION**

**SPECIALISED REHABILITATION**

**DISCHARGE**

**END OF LIFE CARE**

### **To Include:**

A&P of brain and nervous system

Indications for neurological assessment

Specific neuro assessment tools

- Pupil reaction and size
- GCS
- Clinical signs of neuro deterioration
- Impact of neurological deterioration
- Neurological observations

Seizure activity

Psychological conditions affecting neurological status

Understand concept/physiology of temperature regulation

- Temp control
- post VF arrest/therapeutic, hypothermia, hyperpyrexia
- Complications of hypothermia/hyperthermia
- Causes of temperature abnormalities

Conditions causing neurological deficits

Effects of neurological trauma on psychological function

Immobilisation for suspected/confirmed cervical spine injury

- Safely move patient with spinal/cervical injury
- Safely transfer patient with spinal/cervical injury
- Complications of immobilisation aids

Pain management

- Pain Score
- PCA
- Acute pain guidelines
- Psychological and physiological effects of prolonged sedation

Therapies relevant to specific neuro conditions

Patient positioning

Raised ICP

ICP bolts

Knowledge of communication and cognition disorders

Knowledge of NICE guidelines

**ELEMENTS OF CARE ON THE CRITICAL CARE  
PATHWAY**

**ADMISSION**

**TRANSFER**

**INFORMATION, ADVICE AND  
SUPPORT FOR PATIENTS AND FAMILIES**

**GENERIC**

**RESPIRATORY**

**CARDIO-VASCULAR**

**RENAL & HOMEOSTASIS**

**NEUROLOGICAL**

**MEDICATION**

**NUTRITION**

**SPECIALISED REHABILITATION**

**DISCHARGE**

**END OF LIFE CARE**

**Skills and Ability to:**

PHARM29: Take a medication history

CHS179: Advise on requirements for choice of therapeutic intervention (8 only)

**Administration**

AH2: Prepare to, and administer medication to individuals, and monitor the effects

CHS2: Assist in the administration of medication

EUSC19: Administer pharmaceutical interventions

PSL2: Set up and renew syringe driver/infusion device for subcutaneous use and deliver treatment

CHS23: Carry out intravenous infusion

CHS51: Discontinue infusions delivered subcutaneously and remove syringe driver or infusion device

CHS164: Manage pain relief for an individual

IPC7: Safely dispose of healthcare waste, including sharps, to prevent the spread of infection

CHS78: Administer oxygen safely and effectively

CHS74: Manage an individual's medication to achieve optimum outcomes

CHS1: Receive and store medication and products

**Documentation**

HSC21: Communicate with, and complete records for individuals

HSC41: Use and develop methods and systems to communicate record and report

LANTRA CU6: Maintain communications and records within the organisation

**ELEMENTS OF CARE ON THE CRITICAL CARE  
PATHWAY**

**ADMISSION**

**TRANSFER**

**INFORMATION, ADVICE AND  
SUPPORT FOR PATIENTS AND FAMILIES**

**GENERIC**

**RESPIRATORY**

**CARDIO-VASCULAR**

**RENAL & HOMEOSTASIS**

**NEUROLOGICAL**

**MEDICATION**

**NUTRITION**

**SPECIALISED REHABILITATION**

**DISCHARGE**

**END OF LIFE CARE**

**To Include:**

Pharmacological properties, actions and side effects and complications of:

- Nitrates
- Inotropes
- Anti-arrhythmics
- Beta blockers
- ACE inhibitors
- Calcium channel blockers
- Principle and effects of 'wind time' associated with volumetric syringe drivers
- IV drug administration
- Risks and treatments of IV therapy
- IV incompatibilities and interactions
- Drugs used in cardiac arrest

Indications and contra-indications for administration of:

- Oxygen
- Naloxone
- anti emetics
- sedation
- epidural

Pharmacological properties, actions and side effects and complications of:

- Adjunct analgesia
- Epidural
- Entonox
- sedation
- Bolus/top up dose
- Pump infusion rate
- Total volume infused

Level of motor and sensory block

Entonox use and methods of delivery

Block height – epidural assessment

Pharmacological agents to reverse the effects of sedatives

Calculate correct drug doses

**ELEMENTS OF CARE ON THE CRITICAL CARE PATHWAY**

ADMISSION

TRANSFER

INFORMATION, ADVICE AND SUPPORT FOR PATIENTS AND FAMILIES

GENERIC

RESPIRATORY

CARDIO-VASCULAR

RENAL & HOMEOSTASIS

NEUROLOGICAL

MEDICATION

NUTRITION

SPECIALISED REHABILITATION

DISCHARGE

END OF LIFE CARE

Sedation

- scoring tools
- documentation of daily holds
- ventilator care bundle

Administration

Via:

- Epidural
- Subcutaneous
- IV
- Oral
- PCA
- Inhalation

Safe disposal of sharps and spare meds

DVT prophylaxis

Stress ulcer prophylaxis

Insulin therapy – specific to Critical care

Laxatives

MRSA eradication

Oxygen

absorbing/prokinetics

Appropriate administration route

Fluids (maintenance, bolus etc)

Antibiotics

Mouth care

Risk assessment

- Pregnancy
- Inhaled meds
- Thalidomide

**Storage**

- Controlled drugs
- TPN
- Fridge products

**Checklists**

- Pre op assessment
- Stopping meds
- Move from IV to oral

**ELEMENTS OF CARE ON THE CRITICAL CARE  
PATHWAY**

**ADMISSION**

**TRANSFER**

**INFORMATION, ADVICE AND  
SUPPORT FOR PATIENTS AND FAMILIES**

**GENERIC**

**RESPIRATORY**

**CARDIO-VASCULAR**

**RENAL & HOMEOSTASIS**

**NEUROLOGICAL**

**MEDICATION**

**NUTRITION**

**SPECIALISED REHABILITATION**

**DISCHARGE**

**END OF LIFE CARE**

**Documentation**

Contemporaneous reporting

- Legibility
- Date
- Name
- Designation

Patient weight recorded

Local incident reporting

Root cause analysis and action plans

**ELEMENTS OF CARE ON THE CRITICAL CARE  
PATHWAY**

**ADMISSION**

**TRANSFER**

**INFORMATION, ADVICE AND  
SUPPORT FOR PATIENTS AND FAMILIES**

**GENERIC**

**RESPIRATORY**

**CARDIO-VASCULAR**

**RENAL & HOMEOSTASIS**

**NEUROLOGICAL**

**MEDICATION**

**NUTRITION**

**SPECIALISED REHABILITATION**

**DISCHARGE**

**END OF LIFE CARE**

**Skills and Ability to:**

CHS99: Refer individuals to specialist sources of assistance in meeting their health care needs

CCO1: Assess bowel dysfunction

CHS93: Agree a dietary plan for patients with a specified medical condition

CHS149: Monitor and review individuals' progress in relation to maintaining optimum nutritional status

CHS118: Form a professional judgment of an individual's health condition

CHS15: Insert and secure nasogastric tubes

CHS16: Undertake care for individuals with nasogastric tubes

CHS17: Carry out extended feeding techniques to ensure individuals' nutritional and fluid intake

DYS2: Undertake a comprehensive dysphagia assessment

DYS3: Undertake a specialist dysphagia assessment

DYS4: Develop a dysphagia care plan

CHS159: Provide support to individuals to develop skills in managing dysphagia

CHS160: Assist others to monitor individuals' attempts at managing dysphagia

HSC214: Help individuals to eat and drink

CHS147: Administer oral nutritional products to individuals

CHS92: Review and monitor a patient's nutritional wellbeing



**ELEMENTS OF CARE ON THE CRITICAL CARE PATHWAY**

ADMISSION

TRANSFER

INFORMATION, ADVICE AND SUPPORT FOR PATIENTS AND FAMILIES

GENERIC

RESPIRATORY

CARDIO-VASCULAR

RENAL & HOMEOSTASIS

NEUROLOGICAL

MEDICATION

**NUTRITION**

SPECIALISED REHABILITATION

DISCHARGE

END OF LIFE CARE

**To Include:**

A&P of gastrointestinal system and main areas of digestion/absorption

Clinical indications for nutritional support

Indications for surgery re pre existing conditions and trauma

Relevance of specific post-op observations

Complications of post-op surgery and anaesthesia

Microbial risks associated with Enteral feeding

Complications of Enteral/parenteral feeding

Dysphasia signs and symptoms

Normal swallowing process

**Assessment**

Methods to monitor and estimate nutritional status

Referral to dietitian

Feeding methods:

- G tube
- PEG
- Jejunal
- NG
- TPN

**Treatment**

- Consent
- Equipment
- Positioning
- Safe practice
- Check positioning
- Patency of tubes/flushing
- Removal

Indications and contraindications and Potential complications

Types of patient requiring NG tube

For jejunal lumen demonstrate procedure

- Flushing
- During feeding
- No feeding occurring
- Establishing feeding
- Action in the case of discomfort

Contraindications for drugs administered via jejunal

**ELEMENTS OF CARE ON THE CRITICAL CARE  
PATHWAY**

**ADMISSION**

**TRANSFER**

**INFORMATION, ADVICE AND  
SUPPORT FOR PATIENTS AND FAMILIES**

**GENERIC**

**RESPIRATORY**

**CARDIO-VASCULAR**

**RENAL & HOMEOSTASIS**

**NEUROLOGICAL**

**MEDICATION**

**NUTRITION**

**SPECIALISED REHABILITATION**

**DISCHARGE**

**END OF LIFE CARE**

- Bolus feeding and contraindications of bolus feeding
- Rationale for no rest period
- Bowel management

For gastric lumen demonstrate

- Free gastric drainage
- Aspirations

For surgical jejunostomy procedure

- Cleaning disc/bumper
- Treating inflamed site
- Clamp care

Trust protocol for establishing feeds via

- G tube
- PEG
- Jejunal
- NG
- Phosphate enema

Identify and document bowel activity

Bristol stool chart

Maintain privacy and dignity

Treat as per Trust guidelines

Obtain stool specimen

Safe procedure

- Stool softeners
- Stimulant laxatives
- Bulking agents
- Osmotic agents
- Suppositories
- Relaxit enema
- Aracis oil enema

Demonstrate

- Removal and 2 types of internal flange which secure tube
- Rotation
- Cleaning disc/bumper
- Clamp car
- Treating suspected infection/inflamed stoma site

**ELEMENTS OF CARE ON THE CRITICAL CARE PATHWAY**

**ADMISSION**

**TRANSFER**

**INFORMATION, ADVICE AND SUPPORT FOR PATIENTS AND FAMILIES**

**GENERIC**

MH25: Contri

**RESPIRATORY**

**CARDIO-VASCULAR**

**RENAL & HOMEOSTASIS**

**NEUROLOGICAL**

**MEDICATION**

CHS136: Assi

**NUTRITION**

**SPECIALISED REHABILITATION**

**DISCHARGE**

**END OF LIFE CARE**

**Skills and Ability to:**

**Coordinate Rehabilitation**

CHS59: Respond to referrals of individuals with health conditions

GEN43: Monitor and review the rehabilitation process with the individual, their family, carers and other professionals

GEN45: Evaluate the outcomes of the individual's rehabilitation

**Assess Rehabilitation Needs**

HSC414: Assess individual needs and preferences

EUSC52: Assess an individual's needs for psychological, emotional or social rehabilitation

CHS216: Assess an individual's capabilities for rehabilitation or assistive technology

EUSC02: Obtain supporting information to inform the assessment of an individual

MH25: Contribute to the assessment of needs and the planning, evaluation and review of individualised programmes of care for individuals

EUSC04: Determine an individual's state of physical health and fitness

**Set Rehabilitation Goals**

PHARM24: Work with individuals with mental health needs to negotiate and agree plans for addressing those needs

HSC351: Plan, agree and implement development activities to meet individual needs

CHS135: Implement programmes and treatments with individuals who have restricted movement / mobility

CHS136: Assist in the implementation of programmes and treatments with individuals who have severely restricted movement / mobility

FMH15: Increase the individual's capacity to manage negative or distressing thoughts and emotional state

HSC350: Recognise, respect and support the spiritual well-being of individuals

**Refer for Support**

GEN38: Arrange access to services identified in the individual's rehabilitation plan

**Provide Information**

GEN14: Provide advice & information to individuals on how to manage their own condition

Hfm\_H4.7: Enable carers to develop knowledge, understanding and skills to support individuals in managing their health

PE1: Enable individuals to make informed health choices and decisions

**ELEMENTS OF CARE ON THE CRITICAL CARE  
PATHWAY**

**ADMISSION**

**TRANSFER**

**INFORMATION, ADVICE AND  
SUPPORT FOR PATIENTS AND FAMILIES**

**GENERIC**

**RESPIRATORY**

**CARDIO-VASCULAR**

**RENAL & HOMEOSTASIS**

**NEUROLOGICAL**

**MEDICATION**

**NUTRITION**

**SPECIALISED REHABILITATION**

**DISCHARGE**

**END OF LIFE CARE**

**To Include:**

A&P – Multi-system

Pharmacology

In depth knowledge of progression of critical illness and patterns of recovery

In depth knowledge of MDT – roles, referral criteria, on-going care needs

In-depth knowledge of highly specialized rehabilitation for critical care patients

- Assessment tools
- Common conditions
- Specific medical devices/equipment
- Therapy interventions
- Motivational strategies
- Therapy interventions
- Goal setting
- Psychological assessment and therapy

Complications of immobilisation, prevention and treatment

Effects of prolonged sedation, prevention and treatment

NICE 83

Physical and psychological problems associated with critical illness

Knowledge of alternative rehab strategies for complex/highly complex patients

Ability to share and develop highly specialised information

**ELEMENTS OF CARE ON THE CRITICAL CARE  
PATHWAY**

**ADMISSION**

**TRANSFER**

**INFORMATION, ADVICE AND  
SUPPORT FOR PATIENTS AND FAMILIES**

**GENERIC**

**RESPIRATORY**

**CARDIO-VASCULAR**

**RENAL & HOMEOSTASIS**

**NEUROLOGICAL**

**MEDICATION**

**NUTRITION**

**SPECIALISED REHABILITATION**

**DISCHARGE**

**END OF LIFE CARE**

**Skills and Ability to:**

CHS89: Evaluate treatment plans with individuals and those involved in their care

CHS122: Prepare a discharge plan with individuals (7&8 only)

GEN28: Discharge and transfer individuals from a service of your care (7&8 only)

CHS126: Conduct handover between healthcare personnel

CHS169: Comply with legal requirements for maintaining confidentiality in healthcare

***ELEMENTS OF CARE ON THE CRITICAL CARE  
PATHWAY***

*ADMISSION*

*TRANSFER*

*INFORMATION, ADVICE AND  
SUPPORT FOR PATIENTS AND FAMILIES*

*GENERIC*

*RESPIRATORY*

*CARDIO-VASCULAR*

*RENAL & HOMEOSTASIS*

*NEUROLOGICAL*

*MEDICATION*

*NUTRITION*

*SPECIALISED REHABILITATION*

***DISCHARGE***

*END OF LIFE CARE*

**To Include:**

Discharge of patient with tracheostomy

- Appropriate equipment
- Trachy form
- Appropriate trachy tube
- Receiving staff competent with trachy

**ELEMENTS OF CARE ON THE CRITICAL CARE PATHWAY**

**ADMISSION**

**TRANSFER**

**INFORMATION, ADVICE AND SUPPORT FOR PATIENTS AND FAMILIES**

**GENERIC**

**RESPIRATORY**

**CARDIO-VASCULAR**

**RENAL & HOMEOSTASIS**

**Organ Donat**

**NEUROLOGICAL**

**MEDICATION**

**NUTRITION**

**SPECIALISED REHABILITATION**

**DISCHARGE**

**END OF LIFE CARE**

**Skills and Ability to:**

**Assessment and Prognostication**

HSC414: Assess individual needs and preferences

HSC427: Assess the needs of carers and family

**Advance Care Planning**

AG1: Develop, implement and review care plans for individuals

**Symptom management, maintaining comfort and well-being**

CHS17: Carry out extended feeding techniques to ensure individuals' nutritional and fluid intake

CCO9: Enable individuals to effectively evacuate their bowels

CHS164: Manage pain relief for an individual

CHS97: Organise a programme of support following withdrawal from treatment

**Communication**

CHS48: Communicate significant news to individuals

HSC368: Present individuals' needs and preferences

HSC384: Support individuals through bereavement

HSC385: Support individuals through the end of life process

**Organ Donation**

RenDD1: Identify potential donors among patients

**ELEMENTS OF CARE ON THE CRITICAL CARE PATHWAY**

**ADMISSION**

**TRANSFER**

**INFORMATION, ADVICE AND SUPPORT FOR PATIENTS AND FAMILIES**

**GENERIC**

**RESPIRATORY**

**CARDIO-VASCULAR**

**RENAL & HOMEOSTASIS**

**NEUROLOGICAL**

**MEDICATION**

**NUTRITION**

**SPECIALISED REHABILITATION**

**DISCHARGE**

**END OF LIFE CARE**

**To Include:**

**Assessment and Prognostication**

Take and interpret thorough history including information from carers, family

Mental Capacity

- Assessment of capacity
- Patient advocate when there is a legal duty to instruct IMCA, taking account of religious and cultural considerations

**Symptom management, maintaining comfort and well-being**

End of life care strategies

- DNR
- Advance directives
- Palliative care
- Liverpool Care of the dying pathway

Pharmacological and non-pharmacological interventions for end of life care and their side effects

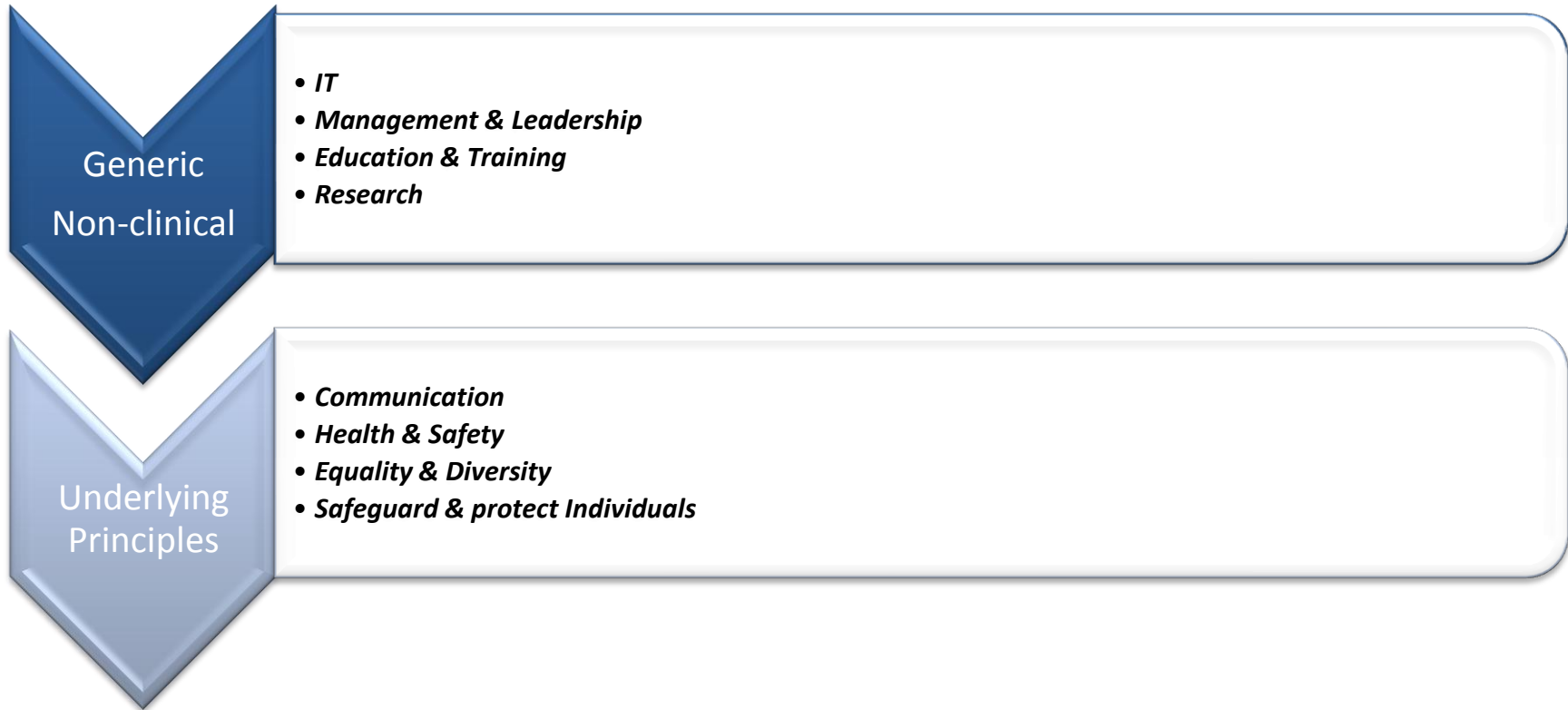
Patient needs

- Psychological and emotional
- Social and relationship
- Spiritual
- Cognitive and communication
- Physiological, physical and functional
- Neurological
- Visual and sensory
- pain

Support groups for patients and families

Patient Advocate





**GENERIC ELEMENTS ON THE CRITICAL CARE  
PATHWAY**

**INFORMATION TECHNOLOGY**

**MANAGEMENT AND LEADERSHIP**

**EDUCATION AND TRAINING**

**RESEARCH**

**COMMUNICATION**

**HEALTH AND SAFETY**

**EQUALITY AND DIVERSITY**

**SAFEGUARD AND PROTECT INDIVIDUALS**

**Skills and Ability to:**

HI4: Collect and validate data and informat

CfA105: Store, retrieve and archive informatio

HI7: Comply with an external audit of data

**GENERIC ELEMENTS ON THE CRITICAL CARE  
PATHWAY**

**INFORMATION TECHNOLOGY**

**MANAGEMENT AND LEADERSHIP**

**EDUCATION AND TRAINING**

**RESEARCH**

**COMMUNICATION**

**HEALTH AND SAFETY**

**EQUALITY AND DIVERSITY**

**SAFEGUARD AND PROTECT INDIVIDUALS**

**Skills and Ability to:**

**People Management**

M&L D3: Recruit, select and keep colleagues

M&L D4: Plan the workforce

M&L D7: Providing learning opportunities for colleagues

M&L B6: Provide leadership in your area of responsibility

M&L D1: Develop productive working relationships with colleagues

M&L C1: Encourage innovation in your team

M&L D5: Allocate and check work in your team

M&L D9: Build and manage teams

**Quality Management**

CHS214: Undertake quality performance checks within healthcare activities

M&L D6: Allocate and monitor the progress and quality of work in your area of responsibility

M&L B10: Manage risk

**Financial Management**

M&L E2: Manage finance for your area of responsibility

**Operational Management**

VSNT0 MV F5: Negotiate and manage agreements for supplies

GEN65: Make recommendations for the use of physical resources

M&L C2: Manage a patient caseload which achieves the best possible outcomes for the individual

M&L B1: Develop and implement operational plans for your area of responsibility

M&L D11: Lead meetings

CM F1: Provide clinical leadership and take responsibility for the continuing professional development of self and others

**Change Management**

M&L C4: Lead change

M&L C5: Plan change

M&L C6: Implement change

M&L F1: Manage a project

**Self Management**

M&L A2: Manage your own resources and professional development

M&L A3: Develop your personal networks

GEN13: Synthesise new knowledge into the development of your own practice

**GENERIC ELEMENTS ON THE CRITICAL CARE  
PATHWAY**

**INFORMATION TECHNOLOGY**

**MANAGEMENT AND LEADERSHIP**

**EDUCATION AND TRAINING**

**RESEARCH**

**COMMUNICATION**

**HEALTH AND SAFETY**

**EQUALITY AND DIVERSITY**

**SAFEGUARD AND PROTECT INDIVIDUALS**

**Skills and Ability to:**

**Plan**

LLUK L3: Identify individual learning aims and programmes

LLUK L5: Agree learning programmes with learners

LLUK L1: Develop a strategy and plan for learning and development

LLUK L7: Prepare and develop resources to support learning

LLUK L4: Design learning programmes

LLUK L6: Develop training sessions

**Teach**

LLUK L8: Manage the contribution of other people to the learning process

LLUK L13: Enable group learning

LLUK L14: Support learners by mentoring in the workplace

LLUK L15: Support and advise individual learners

LLUK L11: Enable learning through demonstrations and instruction

LLUK L12: Enable individual learning through coaching

LLUK L20: Support competence achieved in the workplace

GEN35: Provide supervision to other individuals

**Assess**

LLUK ASA1: Assess candidates using a range of methods

LLUK ASA2: Assess candidates' performance through observation

LLUK L16: Monitor and review progress with learners

**Learn**

GEN36: Make use of supervision

**To Include:**

Preferred learning styles

Assessment methods

- Essay
- Probing Questioning
- OSCE
- 360°
- Simulation

**GENERIC ELEMENTS ON THE CRITICAL CARE  
PATHWAY**

**INFORMATION TECHNOLOGY**

**MANAGEMENT AND LEADERSHIP**

**EDUCATION AND TRAINING**

**RESEARCH**

**COMMUNICATION**

**HEALTH AND SAFETY**

**EQUALITY AND DIVERSITY**

**SAFEGUARD AND PROTECT INDIVIDUALS**

**Skills and Ability to:**

**Plan**

R&D1: Determine a research and development topic worthy of investigation

R&D3: Design and formulate a research and development proposal

R&D4: Determine resources required to implement a research and development proposal

R&D5: Obtain approval for selected R&D activities

R&D2: Identify and recommend sources of funding for selected research and development topics

R&D6: Produce a detailed research and development plan

**Research Activity**

LLUK IL4/10: Investigate the use of information and library services

GEN32: Search information, evidence and knowledge resources and communicate the results

R&D7: Direct and manage research and development activities

R&D8: Conduct investigations in selected research and development topics

R&D8a: Assist in the research work

R&D9: Collate and analyse data relating to research

R&D10: Interpret results of research and development activities

R&D11: Record conclusions and recommendations of research and development activities

**Present Findings**

R&D12: Present findings of research and development activities in written form

R&D13: Present findings of research and development activities orally

**Audit**

HI17: Facilitate the clinical audit process

HI7: Comply with an external audit of data and information

M&L F15: Carry out quality audits

**To Include:**

Critical appraisal

Human Tissue Act

**GENERIC ELEMENTS ON THE CRITICAL CARE  
PATHWAY**

**INFORMATION TECHNOLOGY**

**MANAGEMENT AND LEADERSHIP**

**EDUCATION AND TRAINING**

**RESEARCH**

**UNDERPINNING PRINCIPLES**

- **COMMUNICATION**
- **HEALTH AND SAFETY**
- **EQUALITY AND DIVERSITY**
- **SAFEGUARD AND PROTECT  
INDIVIDUALS**

**Skills and Ability to:**

**Communication**

CfA105: Store and retrieve information

CHS169: Comply with legal requirements for maintaining confidentiality in healthcare

Lantra CU6: Maintain communications and records within the organization

GEN22: Communicate effectively with individuals

ICF:FS : IT communication fundamentals

**Health and Safety**

ENTO WRV1: Make sure your actions contribute to a positive and safe working culture

ENTO HSS6: Conduct a health and safety risk assessment in the workplace

GEN96: Maintain health and safety and security practices within a health setting

ENTO WRV6: Promote a safe and positive culture in the workplace

**Equality and Diversity**

HSC3116: Contribute to promoting a culture that values and respects the diversity of individuals

HSC234: Ensure your own actions, support the equality, diversity, rights and responsibilities of individuals

M&L B11: Promote equality of opportunity and diversity in your area of responsibility

**Safeguard and Protect Individuals**

M&L B8: Ensure compliance with legal, regulatory, ethical and social requirements

CHS169: Comply with legal requirements for maintaining confidentiality in healthcare

HSC24: Ensure your own actions, support the care, protection and well-being of individuals

GEN63: Act within the limits of your competence and authority

**PHARMACOLOGY**

**AN INTRODUCTION AND OVERVIEW OF  
COMMONLY USED DRUGS WITHIN THE  
CRITICAL CARE ENVIRONMENT**

**VASCULAR ACCESS**

**INFECTION CONTROL**

**Skills and Ability to:**

- AH2: Prepare to, and administer medication to individuals, and monitor the effects
- PHARM29: Take a medication history
- EUSC19: Administer pharmaceutical interventions
- CHS23: Carry out intravenous infusion
- CHS164: Manage pain relief for an individual
- IPC7: Safely dispose of healthcare waste, including sharps, to prevent the spread of infection
- CHS74: Manage an individual's medication to achieve optimum outcomes
- CHS1: Receive and store medication and products
- CHS19: Undertake physiological measurements

**To Include:**

- Vasoactives and antiarrhythmics
- Sedation/Analgesia/VTE/Anticoagulants
- Electrolyte maintenance/glycaemic control
- Antibiotic/ antibacterials
- Anaphylaxis
- PPIs/ H<sub>2</sub> antagonists
- Oxygen
- Indications
- Allergies
- Pharmacokinetics/ Pharmacodynamics
- Calculations/concentrations/side effects
- Administration
- Patient weight
- Drug licensing
  - Mixing medicines
  - Making up medicines

Commonly Used Drugs	
<b>Sedation/Analgesia</b>	Morphine Fentanyl Alfentanil Midazolam Clonidine Propofol Remifentanyl
<b>Muscle relaxants</b>	Vecuronium Atracurium Suxanethonium
<b>CVS Inotropes and electrolyte management</b>	Adrenaline Dobutamine Noradrenaline Magnesium Sulphate Potassium Calcium Phosphate
<b>Antiarrhythmics</b>	Amiodarone (load) Amiodarone (continuation...) Digoxin
<b>Diuretics</b>	Furosemide
<b>Anticoagulants</b>	Heparin Epreprinol
<b>PPI</b>	Ranitidine Omeprazole Ranitidine
<b>Broncho dilators</b>	Salbutamol Aminophylline
<b>Crystalloids</b>	Saline Dextrose Hartmans
<b>Colloids</b>	Gelofusin/starches
<b>Hormones</b>	Insulin
<b>Anti convulsents</b>	Lorazepam Diazepam Phenytoin Sodium Valproate
<b>Antibiotics</b>	Co-amoxyclav Benzylpenicillin Vancomycin Metronidazole Tazocin <u>Clarithromycin</u> Meropenium Ticoplanin



**PHARMACOLOGY**

**VASCULAR ACCESS**

**AN INTRODUCTION TO CARE AND  
MAINTENANCE OF VASCULAR  
ACCESS DEVICES, INCLUDING  
HAEMODYNAMIC MONITORING AND  
IV DRUG ADMINISTRATION**

**INFECTION CONTROL**

**Skills and Ability to:**

CHS12: Undertake treatments and dressings related to the care of lesions and wounds

CHS132: Obtain venous blood samples

CHS166: Maintain use of medical devices to assist organ or system function

CHS224: Set up equipment to monitor physiological function

CHS25: Carry out blood collection from fixed or central lines

NB CHS12 applies only to dressings for lines

*PHARMACOLOGY*

*VASCULAR ACCESS*

*AN INTRODUCTION TO CARE AND  
MAINTENANCE OF VASCULAR  
ACCESS DEVICES, INCLUDING  
HAEMODYNAMIC MONITORING AND  
IV DRUG ADMINISTRATION*

*INFECTION CONTROL*

**To Include:**

Obtain arterial/venous blood from existing CVP/ART lines

Types of Access - central venous, PICC, midlines, arterial, HF lines, peripheral cannulae

Central lines

- Indications for use
- Care and maintenance
- Insertion, complications, setting up, CXR, position checks, documentation
- Access and care (infection prevention)
- Administration and flushing
- Blood sampling
- Indications for removal, safe removal

Arterial Lines

- Indications for use
- Care and maintenance
- Insertion, complications, setting up,
- Calibration, on-going monitoring
- Observation of site, limbs
- Interpretation of waveforms
- Alternative means of monitoring/assessing haemodynamic status
- Blood sampling. Flushing
- Safe removal

Peripheral cannulae – care and maintenance

Alternative access methods

Medical device awareness

Monitoring wave forms

Trouble shooting

Zero/alignment of transducer

ANTT

Interpret CVP readings

*PHARMACOLOGY*

*VASCULAR ACCESS*

*INFECTION CONTROL*

**Skills and Ability to:**

IPC2: Perform hand hygiene to prevent the spread of infection

IPC1: Minimise the risks of spreading infection by cleaning and maintaining environments in health and social care settings

IPC3: Clean and remove spillages of blood and other body fluids

IPC5: Minimise the risks of exposure to blood-borne infections while providing care

IPC6: Use personal protective equipment to prevent the spread

## APPENDIX VII – PROJECT CONTRIBUTORS

### PROJECT BOARD

---

Ann Marr	CEO St Helens and Knowsley NHS Foundation Trust
Kathy Doran	CEO NHS Wirral (Chair)
Sarah Clarke	Director (Acting) and Lead for Nursing and Service Improvement CMCCN
Jane Glennon	Programme Manager Skills for Health
Mary Jordan	Project Manager CMCCN

### STRATEGY GROUP

---

Alison Strode	Skills for Health
Coral Hulse	Advanced Nurse Practitioner Mid Cheshire Hospitals Trust
Dawn Clayton	Critical Care Dietitian Warrington Hospital
Dianne Mardell	Director Skills for Health North West
Dr. Gary Masterson	RLBUHT and Medical Lead CMCCN
Greg Barton	Critical Care Pharmacist St Helens and Knowsley NHS Foundation Trust
Heather Cooper	Nurse Consultant East Cheshire Hospitals Trust
Helen McNeill	Critical Care Lecturer Edgehill University
Jane Glennon	Programme Manager Skills for Health
Dr. Jane Harper	Intensive Care Society
Joe McArdle	Assistant Director Education Commissioning - NHS Northwest
John Murphy	RLBUHT and AHP Lead CMCCN (Chair)
Louise Murray	Critical Care Speech and Language Therapist RLBUHT
Mary Jordan	Project Manager CMCCN
Mel Hill	Senior Sister Mid Cheshire Hospitals Trust and Assistant Nurse Lead CMCCN
Dr. Raj Najaraja	Intensivist Wirral University Hospital Foundation Trust
Sarah Dyson	Critical Care Physiotherapist RLBUHT
Sue Louth	NHS North West AHP Workforce Lead

Sarah Clarke Director (Acting) and Lead for Nursing and Service Improvement CMCCN

## REFERENCE GROUP

---

Anne Williams	East Cheshire Hospitals Trust
Bev Riley	Practice Educator St Helens and Knowsley NHS Foundation Trust
Christine Wolfendale	Dietetics Lecturer University of Chester
Coral Hulse	Advanced Nurse Practitioner Mid Cheshire Hospitals Trust
Dawn Clayton	Critical Care Dietitian Warrington Hospital
Dr. Gary Masterson	RLBUHT and Medical Lead CMCCN (Chair)
Greg Barton	Critical Care Pharmacist St Helens and Knowsley NHS Foundation Trust
Heather Cooper	Nurse Consultant East Cheshire Hospitals Trust
Jenny Gowan	Practice Educator Aintree University Hospital Foundation Trust
Jim Doolan	Service Improvement Lead Liverpool Heart and Chest Hospital
Joanne Fynn	Senior Sister Wirral University Hospital Foundation Trust & Asst Nurse Lead CMCCN
John Murphy	Critical Care Technician RLBUHT and AHP Lead CMCCN
Kim Sims	Nurse Manager St Helens and Knowsley NHS Foundation Trust
Laura Jenions	Critical Care Physiotherapist RLBUHT
Lorna Darbyshire	Critical Care Speech and Language Therapist RLBUHT
Louise Murray	Critical Care Speech and Language Therapist RLBUHT
Mel Hill	Senior Sister Mid Cheshire Hospitals Trust and Assistant Nurse Lead CMCCN
Peri Grice	Senior Sister Wirral University Hospital Foundation Trust
Sarah Dyson	Critical Care Physiotherapist RLBUHT
Sian Axon	Clinical Nurse Manager Mid Cheshire Hospitals Trust
Sony Aiyannattu	Specialist Nurse Wirral University Hospital Foundation Trust
Vicky Carr	Practice Educator East Cheshire Hospitals Trust

## APPENDIX VIII – SKILLS FOR HEALTH CAREER FRAMEWORK (1-8)

People at level 8 of the career framework require highly specialised knowledge, some of which is at the forefront of knowledge in a field of work, which they use as the basis for original thinking/research. They are leaders with considerable responsibility, and the ability to research and analyse complex processes. They have responsibility for device improvement or development. They may have considerable clinical and/or management responsibilities, be accountable for service delivery or have a leading education or commissioning role. **Indicative or reference title: Consultant**

People at level 7 of the career framework have a critical awareness of knowledge issues in the field at the interface between different fields. They are innovative and have a responsibility for developing and changing practice and/or services in a complex and unpredictable environment. **Indicative or reference title: Advanced Practitioner**

People at level 6 require a critical understanding of detailed theoretical and practical knowledge and are specialist and/or have management and leadership responsibilities. They demonstrate initiative and are creative in finding solutions to problems. They have some responsibility for team performance and service development and they consistently undertake self development. **Indicative or reference title: Specialist/Senior Practitioner**

People at level 5 will have a comprehensive, specialised, factual and theoretical knowledge. They are able to use knowledge to solve problems creatively, make judgements which require analysis and interpretation and actively contribute to service and self development. They may have responsibility for supervision of staff or training. **Indicative or reference title: Practitioner**

People at level 4 require factual and theoretical knowledge in broad contexts within a field of work. Work is guided by standard operating procedures, protocols or systems of work, but the worker makes judgements, plans activities, contributes to service development and demonstrates self development. They may have responsibility for supervision of some staff. **Indicative or reference title: Assistant/Associate Practitioner**

People at level 3 require knowledge of facts, principles, processes and general concepts in a field of work. They may carry out a wider range of duties than the person working at level 2, and will have more responsibility, with guidance and supervision available when needed. They will contribute to service development, and are responsible for self development. **Indicative or reference title: Senior healthcare assistant/technician**

People at level 2 require basic factual knowledge of a field of work. They may carry out clinical, technical, scientific or administrative duties according to established protocols or procedures, or systems of work. **Indicative or reference title: Support Worker**

People at level 1 are at entry level, and require basic general knowledge. They undertake a limited number of straightforward tasks under direct supervision. They could be any new starter to work in the health sector and progress rapidly to level 2. **Indicative or reference title: Cadet**

Extract from Skills for Health Career Framework

## CAREER FRAMEWORK JOB DESCRIPTORS

The summaries below have been distilled from the Career Framework Descriptors used in the process of levelling jobs onto the Career Framework since 2006. They are used when describing Nationally Transferable Roles, and describe the level of autonomy and responsibility and the kind of decision making required by a job. They provide additional, essential information about a job, alongside National Occupational Standards. The definitions of the more specific job titles have been informed by publications and work from the Department of Health and Professional bodies.

Level 5 Practitioner	Level 6 Practitioner	Advanced Practitioner – Level 7	Consultant Practitioner – Level 8
Practitioners have a broad knowledge base in a particular field of practice which enables them to work with a considerable degree of autonomy. They may have line management responsibilities but will not be responsible for service delivery. They actively use research findings to enhance and underpin their practice. A practitioner is competent in their area of practice and will seek opportunities to improve the service they offer.	Specialist practitioners have developed a high level of knowledge and skill in a specific area of practice. They have a depth of knowledge and understanding which enables them to perform at a high level of practice, take a leadership role, use and develop evidence to inform their practice, and deal with complex, unpredictable environments. They will have their own caseload or work area responsibilities.	Advanced practitioners are experienced professionals who have developed their skills and theoretical knowledge to a very high standard, performing a highly complex role and continuously developing their practice within a defined field and / or having management responsibilities for a section / small department. They will have their own caseload or work area responsibilities.	The consultant practitioner may be expert practitioners and/or practitioners who have a high level of responsibility for the development and delivery of services. There is a strong element of research within the role. They will have overall responsibility for the coordination of R&D programmes as well as ensuring that current research findings are used by all staff to inform their practice. The consultant practitioner will lead by example in developing highly innovative solutions to problems based on original research and inquiry. They will apply a highly developed theoretical and practical knowledge over a wide range of clinical, scientific, technical and/or management functions.
<b>Knowledge and skills</b>	<b>Knowledge and skills</b>	<b>Knowledge and skills</b>	<b>Knowledge and skills</b>
<ul style="list-style-type: none"> <li>➤ Uses comprehensive specialised factual and theoretical knowledge, with an awareness of limits of their knowledge base</li> <li>➤ Able to transfer theoretical and practical knowledge in order to solve problems.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Uses detailed theoretical and practical knowledge of a work area involving a critical understanding of theories and principles</li> <li>➤ Demonstrates mastery and innovation in methods and tools used in a complex and specialised work area.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Uses highly specialised theoretical and practical knowledge some of which is at the forefront of knowledge in the work area covering a range of procedures and underpinned by relevant broad based knowledge, experience and competence.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Uses specialised knowledge to critically analyse, evaluate and synthesise new and complex ideas at the most advanced frontier of their work area.</li> <li>➤ They will create and interpret new knowledge through original research or other advanced scholarship of a quality to satisfy review by peers</li> </ul>

<ul style="list-style-type: none"> <li>➤ Evaluates own practice and identifies own development needs</li> </ul>	<ul style="list-style-type: none"> <li>➤ Evaluates own practice and identifies development needs within a complex environment</li> </ul>	<ul style="list-style-type: none"> <li>➤ This knowledge forms the basis for originality in developing and/or applying ideas.</li> <li>➤ Demonstrates critical awareness of knowledge issues in the work area and at the interface between different work areas</li> </ul>	
<b>Leadership / Management</b>	<b>Leadership / Management</b>	<b>Leadership / Management</b>	<b>Leadership / Management</b>
<ul style="list-style-type: none"> <li>➤ Work is managed rather than supervised and requires problem solving where there are interacting factors leading to unpredictable change</li> <li>➤ Works independently, planning organising and prioritising own work, activities and more complex tasks</li> </ul>	<ul style="list-style-type: none"> <li>➤ Works independently, leads work activities of a team or others.</li> <li>➤ Demonstrates leadership for a work area taking responsibility for managing professional development of individuals and groups.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Demonstrates independence in the direction of practice responding appropriately to social scientific clinical and ethical issues encountered.</li> <li>➤ Demonstrates leadership and innovation in work contexts that are complex and unpredictable and require new strategic approaches.</li> <li>➤ Demonstrates experience of managing change within a complex environment</li> </ul>	<ul style="list-style-type: none"> <li>➤ Demonstrates substantial leadership, innovation and independence in work contexts that are groundbreaking and require the solving of problems that involve many interacting factors.</li> <li>➤ Communicate with authority through engaging in critical dialogue with peers in a specialist community.</li> <li>➤ Scrutinise and reflect on social norms and relationships and lead action to change them.</li> </ul>
<b>Innovation / Decision Making</b>	<b>Innovation / Decision Making</b>	<b>Innovation / Decision Making</b>	<b>Innovation / Decision Making</b>
<ul style="list-style-type: none"> <li>➤ Has a comprehensive range of cognitive and practical skills required to develop creative solutions to abstract problems</li> <li>➤ Makes judgments requiring analysis interpretation and comparison of options</li> </ul>	<ul style="list-style-type: none"> <li>➤ Uses the ability to devise and sustain arguments to solve problems</li> <li>➤ Makes judgments involving a range of facts, options, analysis and interpretation</li> </ul>	<ul style="list-style-type: none"> <li>➤ Solves problems by integrating complex knowledge sources that are sometimes incomplete and in new and unfamiliar contexts. They will make complex judgments.</li> <li>➤ Makes judgments based on incomplete or limited information</li> <li>➤ Develop new skills in response to emerging knowledge and techniques</li> </ul>	<ul style="list-style-type: none"> <li>➤ Extends and redefines knowledge and/or professional practice within a work area or at the interface between work areas.</li> <li>➤ Critically analyses evaluates and synthesises new and complex ideas and strategic decision making based on these processes</li> </ul>
<i>In order to:</i>	<i>In order to:</i>	<i>In order to:</i>	<i>In order to:</i>
<ul style="list-style-type: none"> <li>➤ Performs a broad range of clinical technical managerial or scientific procedures</li> <li>➤ Develops procedures and changes to</li> </ul>	<ul style="list-style-type: none"> <li>➤ Provides specialist clinical, technical, managerial or scientific services and or advice_</li> <li>➤ Implement policy and propose changes</li> </ul>	<ul style="list-style-type: none"> <li>➤ Provide specialist clinical, technical , managerial and/or scientific services across a work area involving complex judgments</li> </ul>	<ul style="list-style-type: none"> <li>➤ Be expert in one or more service areas</li> <li>➤ Develop and influence policy and service developments</li> <li>➤ Make strategic decisions based on new</li> </ul>



<p>working practices or procedures for own work area.</p>	<p>to working practices or procedures.</p>	<ul style="list-style-type: none"> <li>➤ Take responsibility for a work area, specialist services or clinical pathways</li> <li>➤ Propose changes to practices or procedures which impact beyond own work area.</li> <li>➤ Use the specialised problem solving skills required in research and or innovation to develop new knowledge and procedures and to integrate knowledge from different fields</li> <li>➤ Review strategic impact/outcome of the work or team.</li> <li>➤ Undertake supervision and/or teaching and training.</li> </ul> <p>Undertake audit, and possibly initiate and develop R&amp;D programmes.</p>	<p>and complex ideas, is an expert in one or more service areas.</p> <ul style="list-style-type: none"> <li>➤ Carry out operational interactions with strategic decision making capacity within a complex environment</li> <li>➤ Research, conceive, design and implement projects that lead to new knowledge and new procedural solutions.</li> <li>➤ Ensures all staff within their area of responsibility delivers to the highest standard.</li> </ul>
<p><i>They may:</i></p> <ul style="list-style-type: none"> <li>➤ Manage people and review performance of self and others.</li> <li>➤ Reviews and develops performance of self and others</li> <li>➤ Train others and develop team performance</li> <li>➤ Have a responsibility to contribute to administration and management of processes and policies of work area or department</li> <li>➤ Evaluate equipment techniques and procedures and make recommendations</li> <li>➤ Undertake complex audits of a service</li> </ul> <p>Assist in the development of clinical trials or R&amp;D projects</p>	<p><i>They may:</i></p> <ul style="list-style-type: none"> <li>➤ Lead work activities of a team or others.</li> <li>➤ Plan complex activities involving liaison with others and/or over long time periods.</li> <li>➤ Take responsibility for the purchasing/maintenance of assets, equipment and /or resources.</li> <li>➤ Hold a delegated budget.</li> <li>➤ Take responsibility for teaching or training inside/outside work area.</li> <li>➤ Manage a team and resources in environments that are unpredictable taking responsibility for decision making in unpredictable work or study contexts.</li> </ul> <p>Undertake clinical trials and research projects where this activity is a significant part of the job description</p>	<p><i>They may:</i></p> <ul style="list-style-type: none"> <li>➤ Be responsible for a work area budget</li> <li>➤ Manage staff and/or services ranging in size and complexity.</li> <li>➤ Plan and/or organise a broad range of complex activities or programmes with formulation of strategies.</li> </ul> <p>Devise training or development programmes.</p>	<p><i>They may:</i></p> <ul style="list-style-type: none"> <li>➤ Be accountable for delivery of one or more services</li> <li>➤ Hold a budget for one or more services</li> <li>➤ Direct and influence commissioning/service provision</li> <li>➤ Initiate and develop R and D programmes</li> <li>➤ Be responsible for overall delivery of teaching or training programmes</li> </ul>

## NOS IDENTIFIED AS RELEVANT FOR NURSE - CAREER FRAMEWORK LEVEL 5 TO LEVEL 6

No. of National Occupational Standards: 124

### 1 - Communication (underpinning principle)

HSC21: Communicate with, and complete records for individuals  
HSC31: Promote effective communication with, for and about individuals  
CHS126: Conduct handover between healthcare personnel  
MH1: Promote effective communication and relationships with people who are troubled or distressed  
CHS104: Brief the team for an individual's intervention  
GEN22: Communicate effectively with individuals  
Lantra CU6: Maintain communications and records within the organisation  
CHS94: Explain to the family the patient's brain stem death  
CHS48: Communicate significant news to individuals  
CHS95: Explain to the family the patient's condition and likely death  
HSC369: Support individuals with specific communication needs  
HSC370: Support individuals to communicate using technology

### 2 - Equality and Diversity (underpinning principle)

HSC3116: Contribute to promoting a culture that values and respects the diversity of individuals  
HSC234: Ensure your own actions, support the equality, diversity, rights and responsibilities of individuals

### 3 - Health safety and security (underpinning principle)

IPC1: Minimise the risks of spreading infection by cleaning and maintaining environments in health and social care settings  
IPC3: Clean and remove spillages of blood and other body fluids  
IPC5: Minimise the risks of exposure to blood-borne infections while providing care  
GEN82: Check, connect and disconnect medical gas cylinders and outlets  
GEN96: Maintain health, safety and security practices within a health setting  
ENTO HSS6: Conduct a health and safety risk assessment of a workplace  
ENTO WRV1: Make sure your actions contribute to a positive and safe working culture  
ENTO HSS1: Make sure your own actions reduce risks to health and safety  
IPC2: Perform hand hygiene to prevent the spread of infection

### 4 - Safeguard and protect individuals (underpinning principle)

CHS169: Comply with legal requirements for maintaining confidentiality in healthcare  
HSC24: Ensure your own actions, support the care, protection and well-being of individuals  
GEN63: Act within the limits of your competence and authority

### A - Assessment and Investigation of health

CHS38: Plan assessment of an individual's health status  
GEN79: Coordinate the progress of individuals through care pathways  
CHS118: Form a professional judgment of an individual's health condition  
CHS4: Undertake tissue viability risk assessment for individuals  
CHS167: Obtain valid consent or authorisation  
CHS168: Obtain a patient/client history  
EUSC02: Obtain supporting information to inform the assessment of an individual  
CHS24: Carry out arterial puncture and collect arterial blood

CHS25: Carry out blood collection from fixed or central lines  
CHS132: Obtain venous blood samples  
CHS185: Perform basic specimen/sample preparation  
CHS186: Store specimens and samples  
CHS192: Perform standard tests using an automated analyser  
CHS19: Undertake physiological measurements  
CHS217: Perform point of care testing  
CHS130: Perform routine Electrocardiograph (ECG) Procedures  
HCS6: Perform a range of procedures to monitor/support physiological response to modify function, performance or therapy  
CC01: Assess bladder and bowel dysfunction  
CHS83: Interpret the findings of healthcare investigations  
CHS39: Assess an individual's health status

### **B - Planning/preparation for and addressing of health requirements**

CHS99: Refer individuals to specialist sources of assistance in meeting their health care needs  
CHS122: Prepare a discharge plan with individuals  
GEN28: Discharge and transfer individuals from a service or your care  
IPC6: Use personal protective equipment to prevent the spread of infection  
CHS6: Move and position individuals  
PCS23: Assist in the transfer and positioning of patients within the perioperative environment  
GEN6: Manage environments and resources for use during healthcare activities  
CHS101: Organise the collection and receipt of blood / blood products for transfusion  
CHS102: Prepare to administer transfusion of blood / blood products to patients  
HCS2: Preparation of products for use within healthcare activities  
PCS2: Contribute to the safe use of medical devices in the perioperative environment  
CHD HB1: Recognise indications of heart conditions and take appropriate action  
CHS163: Manage Emergency Situations  
CHS124: Manage and support the progress of individuals through patient pathways  
CHS8: Insert and secure urethral catheters and monitor and respond to the effects of urethral catheterisation  
CHS103: Administer a transfusion of blood / blood products  
CHS22: Perform intravenous cannulation  
CC04: Manage supra pubic catheters  
CC02: Insert and secure urethral catheters  
PSL2: Set up and renew syringe driver/infusion device for subcutaneous use and deliver treatment  
CHS51: Discontinue infusions delivered subcutaneously and remove syringe driver or infusion device  
CHS166: Maintain use of medical devices to assist organ or system function  
PCS6: Measure and record patients' body fluid output  
PCS10: Carry out delegated activities in receiving, handling and dispatching clinical specimens  
PCS17: Receive and handle clinical specimens within the sterile field  
HCS\_RESP12: Establish patients on acute non-invasive ventilatory support  
CHS23: Carry out intravenous infusion  
CHS17: Carry out extended feeding techniques to ensure individuals' nutritional and fluid intake  
EUSC20: Use pre-planned methods to manage blood loss  
EUSC28: Extract excess fluids from an individual  
CHS50: Monitor infusions delivered subcutaneously by a syringe driver or infusion device  
CHS165: Manage fluid levels and balance  
CHS164: Manage pain relief for an individual  
CHS14: Remove wound closure materials from individuals  
CHS133: Remove wound drains  
CHS135: Implement programmes and treatments with individuals who have restricted movement / mobility

CHS136: Assist in the implementation of programmes and treatments with individuals who have severely restricted movement / mobility  
CHS12: Undertake treatments and dressings related to the care of lesions and wounds  
CHS13: Undertake wound drainage care  
CHS16: Undertake care for individuals with nasogastric tubes  
EUSC25: Monitor the individual within the critical care environment  
EUSC26: Care for the individual within the critical care environment  
EUSC50: Monitor and maintain the status of an individual during their post intervention transportation  
CHS10: Undertake stoma care  
CHS11: Undertake personal hygiene for individuals unable to care for themselves  
CHS5: Undertake agreed pressure area care  
CHS9: Undertake care for individuals with urinary catheters  
CHS2: Assist in the administration of medication  
AH2: Prepare to, and administer medication to individuals, and monitor the effects  
EUSC19: Administer pharmaceutical interventions  
CHS49: Deliver subcutaneous treatments using syringe drivers or infusion devices  
CHS78: Administer oxygen safely and effectively  
CHS147: Administer oral nutritional products to individuals  
CHS74: Manage an individual's medication to achieve optimum outcomes  
HCS\_HM15: Manage anticoagulation therapy  
PHARM29: Take a medication history  
CHS1: Receive and store medication and products  
HSC224: Observe, monitor and record the conditions of individuals  
EUSC49: Provide care for individuals as they recover from invasive interventions  
CHS67: Support individuals with long term conditions to manage their respiratory function  
HSC384: Support individuals through bereavement  
CC09: Enable individuals to effectively evacuate their bowels

#### **D - Supporting health care with medical devices, products and equipment**

CHS224: Set up equipment to monitor physiological function

#### **E - Provision of facilities, estates and logistics for health care**

DEC4: Prepare re-usable medical devices for sterilisation  
DEC5: Carry out sterilization and disinfection of re-useable medical devices  
IPC7: Safely dispose of healthcare waste, including sharps, to prevent the spread of infection  
PCS1: Prepare for and transport patients to, within and from the perioperative care environment  
EC23: Evacuate and transport individuals who require emergency transport to suitable locations for treatment/intervention/care

#### **F - Develop and share information and knowledge on health**

HI4: Collect and validate data and information  
CHS179: Advise on requirements for choice of therapeutic intervention

#### **G - Management and administration of health care**

GEN39: Contribute to effective multidisciplinary team working  
M&L D1: Develop productive working relationships with colleagues  
M&L A2: Manage your own resources and professional development  
HT4: Manage and organise your own time and activities  
HI7: Comply with an external audit of data and information  
ICF: FS: IT communication fundamentals

## H - Education and learning around health

GEN13: Synthesise new knowledge into the development of your own practice

AC3: Contribute to the development of the knowledge and practice of others

## ADDITIONAL NOS IDENTIFIED AS RELEVANT FOR NURSE - CAREER FRAMEWORK LEVEL 7 TO LEVEL 8

---

No. of National Occupational Standards: 32

### 1 - Communication (underpinning principle)

HSC41: Use and develop methods and systems to communicate record and report

### 4 - Safeguard and protect individuals (underpinning principle)

M&L B8: Ensure compliance with legal, regulatory, ethical and social requirements.

### A - Assessment and Investigation of health

EUSC04: Determine an individual's state of physical health and fitness

RenDD1: Identify potential donors among patients

EUSC52: Assess an individuals' needs for psychological, emotional or social rehabilitation

HSC427: Assess the needs of carers and families

### B - Planning/preparation for and addressing of health requirements

CHS41: Determine a treatment plan for an individual

AG1: Develop, implement and review care plans for individuals

CHS97: Organise a programme of support following withdrawal from treatment

GEN38: Arrange access to services identified in the individual's rehabilitation plan

CHS15: Insert and secure nasogastric tubes

HSC350: Recognise, respect and support the spiritual well-being of individuals

FMH15: Increase the individual's capacity to manage negative or distressing thoughts and emotional states

### F - Develop and share information and knowledge on health

M&L A3: Develop your personal networks

GEN32: Search information, evidence and knowledge resources and communicate the results

R&D8: Conduct investigations in selected research and development topics

### G - Management and administration of health care

M&L B1: Develop and implement operational plans for your area of responsibility

M&L D9: Build and manage teams

M&L C2: Encourage innovation in your area of responsibility

M&L C6: Implement change

M&L D2: Develop productive working relationships with colleagues and stakeholders

M&L D3: Recruit, select and keep colleagues

M&L D6: Allocate and monitor the progress and quality of work in your area of responsibility

GEN65: Make recommendations for the use of physical resources

M&L E2: Manage finance for your area of responsibility

M&L F1: Manage a project

CHS214: Undertake quality performance checks within healthcare activities

### H - Education and learning around health

LLUK L14: Support learners by mentoring in the workplace

LLUK L16: Monitor and review progress with learners

M&L D7: Providing learning opportunities for colleagues  
LLUK ASA1: Assess candidates using a range of methods  
GEN14: Provide advice & information to individuals on how to manage their own condition

## **NOS IDENTIFIED AS RELEVANT FOR ALL STAFF LEVEL 7 TO LEVEL 8**

---

**No. of National Occupational Standards: 29**

### **1 - Communication (underpinning principle)**

CHS48: Communicate significant news to individuals

### **2 - Equality and Diversity (underpinning principle)**

M&L B11: Promote equality of opportunity and diversity in your area of responsibility

### **3 - Health safety and security (underpinning principle)**

ENTO HSS6: Conduct a health and safety risk assessment of a workplace

### **D - Supporting health care with medical devices, products and equipment**

HI11: Appraise information and knowledge resources

### **F - Develop and share information and knowledge on health**

R&D1: Determine a research and development topic worthy of investigation  
R&D2: Identify and recommend sources of funding for selected research and development topics  
R&D3: Design and formulate a research and development proposal  
R&D4: Determine resources required to implement a research and development proposal  
R&D5: Obtain approval for selected research and development activities  
R&D6: Produce a detailed research and development plan  
R&D7: Direct and manage research and development activities  
R&D9: Collate and analyse data relating to research  
R&D10: Interpret results of research and development activities  
R&D11: Record conclusions and recommendations of research and development activities  
R&D12: Present findings of research and development activities in written form  
R&D13: Present findings of research and development activities orally

### **G - Management and administration of health care**

M&L B10: Manage risk  
M&L C1: Encourage innovation in your team  
M&L C4: Lead change  
M&L C5: Plan change  
VSNT0 MV F5: Negotiate and manage agreements for supplies  
M&L D11: Lead meetings

### **H - Education and learning around health**

LLUK L1: Develop a strategy and plan for learning and development  
LLUK L5: Agree learning programmes with learners  
LLUK L8: Manage the contribution of other people to the learning process  
LLUK L11: Enable learning through demonstrations and instruction  
LLUK L12: Enable individual learning through coaching  
LLUK L13: Enable group learning  
LLUK L15: Support and advise individual learners

## **NOS IDENTIFIED AS RELEVANT FOR PHYSIOTHERAPIST – LEVEL 7 TO LEVEL 8**

---

**No. of National Occupational Standards: 63**

### **1 - Communication (underpinning principle)**

HSC21: Communicate with, and complete records for individuals  
CHS104: Brief the team for an individual's intervention  
GEN22: Communicate effectively with individuals

### **2 - Equality and Diversity (underpinning principle)**

HSC3116: Contribute to promoting a culture that values and respects the diversity of individuals  
HSC234: Ensure your own actions, support the equality, diversity, rights and responsibilities of individuals

### **3 - Health safety and security (underpinning principle)**

GEN82: Check, connect and disconnect medical gas cylinders and outlets  
GEN96: Maintain health, safety and security practices within a health setting  
ENTO WRV1: Make sure your actions contribute to a positive and safe working  
IPC2: Perform hand hygiene to prevent the spread of infection  
HSC22: Support the health and safety of yourself and individuals

### **4 - Safeguard and protect individuals (underpinning principle)**

CHS169: Comply with legal requirements for maintaining confidentiality in healthcare  
HSC24: Ensure your own actions, support the care, protection and well-being of individuals  
GEN63: Act within the limits of your competence and authority

### **A - Assessment and Investigation of health**

CHS40: Establish a diagnosis of an individual's health condition  
CHS118: Form a professional judgment of an individual's health condition making baseline observations and tests, preparing a patient history and consulting with others.  
CHS46: Assess risks associated with health conditions  
CHS167: Obtain valid consent or authorisation  
CHS168: Obtain a patient/client history  
CHS83: Interpret the findings of healthcare investigations  
CHS39: Assess an individual's health status  
CHS216: Assess an individual's capabilities for rehabilitation or assistive technology

### **B - Planning/preparation for and addressing of health requirements**

CHS41: Determine a treatment plan for an individual  
CHS59: Respond to referrals of individuals with health conditions  
CHS99: Refer individuals to specialist sources of assistance in meeting their health care needs  
CHS122: Prepare a discharge plan with individuals  
GEN28: Discharge and transfer individuals from a service or your care  
IPC6: Use personal protective equipment to prevent the spread of infection  
CHS6: Move and position individuals  
GEN38: Arrange access to services identified in the individual's rehabilitation plan  
CHS163: Manage Emergency Situations  
CHS124: Manage and support the progress of individuals through patient pathways  
HCS\_RESP12: Establish patients on acute non-invasive ventilatory support  
EUSC25: Monitor the individual within the critical care environment  
EUSC26: Care for the individual within the critical care environment  
CHS78: Administer oxygen safely and effectively  
CHS47: Monitor and assess patients following treatments

CHS53: Evaluate the delivery of care plans to meet the needs of individuals  
GEN43: Monitor and review the rehabilitation process with the individual, their family, carers and other professionals  
GEN45: Evaluate the outcomes of the individual's rehabilitation  
CHS88: Agree rehabilitation plans with individuals, families, carers and other professionals  
CHS89: Evaluate treatment plans with individuals and those involved in their care  
CHs163: manage Emergency Situations

#### **D - Supporting health care with medical devices, products and equipment**

CHS206: Adapt healthcare equipment, medical devices, assistive technology, or products to meet individual's needs  
CHS223: Fit healthcare equipment, medical devices, assistive technology, or products to meet individual's clinical needs

#### **F - Develop and share information and knowledge on health**

CHS179: Advise on requirements for choice of therapeutic intervention  
M&L A3: Develop your personal networks  
R&D8: Conduct investigations in selected research and development topics  
R&D8a: Assist in the research work

#### **G - Management and administration of health care**

M&L B6: Provide leadership in your area of responsibility  
GEN39: Contribute to effective multidisciplinary team working  
M&L D2: Develop productive working relationships with colleagues and stakeholders  
M&L D3: Recruit, select and keep colleagues  
M&L D6: Allocate and monitor the progress and quality of work in your area of responsibility  
HT4: Manage and organise your own time and activities  
CHS170: Develop clinical protocols for delivery of services  
CHS171: Develop procedures for delivery of services  
GEN23: Monitor your own work practices  
HI17: Facilitate the clinical audit process

#### **H - Education and learning around health**

GEN36: Make use of supervision  
GEN13: Synthesise new knowledge into the development of your own practice  
GEN35: Provide supervision to other individuals  
AC3: Contribute to the development of the knowledge and practice of others  
GEN14: Provide advice & information to individuals on how to manage their own condition



## **NOS IDENTIFIED AS RELEVANT FOR OCCUPATIONAL THERAPIST – LEVEL 7 TO LEVEL 8**

---

**No. of National Occupational Standards: 60**

### **1 - Communication (underpinning principle)**

HSC21: Communicate with, and complete records for individuals

MH1: Promote effective communication and relationships with people who are troubled or distressed

CHS104: Brief the team for an individual's intervention

GEN22: Communicate effectively with individuals

### **2 - Equality and Diversity (underpinning principle)**

HSC3116: Contribute to promoting a culture that values and respects the diversity of individuals

HSC234: Ensure your own actions, support the equality, diversity, rights and responsibilities of individuals

### **3 - Health safety and security (underpinning principle)**

GEN96: Maintain health, safety and security practices within a health setting

ENTO WRV1: Make sure your actions contribute to a positive and safe working culture

ENTO HSS1: Make sure your own actions reduce risks to health and safety

IPC2: Perform hand hygiene to prevent the spread of infection

HSC22: Support the health and safety of yourself and individuals

### **4 - Safeguard and protect individuals (underpinning principle)**

CHS169: Comply with legal requirements for maintaining confidentiality in healthcare

HSC24: Ensure your own actions, support the care, protection and well-being of individuals

GEN63: Act within the limits of your competence and authority

### **A - Assessment and Investigation of health**

CHS118: Form a professional judgment of an individual's health condition

CHS46: Assess risks associated with health conditions

CHS167: Obtain valid consent or authorisation

CHS168: Obtain a patient/client history

CHS39: Assess an individual's health status

CHS216: Assess an individual's capabilities for rehabilitation or assistive technology

### **B - Planning/preparation for and addressing of health requirements**

MH25: Contribute to the assessment of needs and the planning, evaluation and review of individualised programmes of care for individuals

CHS41: Determine a treatment plan for an individual

CHS59: Respond to referrals of individuals with health conditions

CHS99: Refer individuals to specialist sources of assistance in meeting their health care needs

CHS122: Prepare a discharge plan with individuals

GEN28: Discharge and transfer individuals from a service or your care

IPC6: Use personal protective equipment to prevent the spread of infection

CHS6: Move and position individuals

GEN38: Arrange access to services identified in the individual's rehabilitation plan

CHS163: Manage Emergency Situations

CHS124: Manage and support the progress of individuals through patient pathways

FMH15: Increase the individual's capacity to manage negative or distressing thoughts and emotional states

CHS47: Monitor and assess patients following treatments

CHS53: Evaluate the delivery of care plans to meet the needs of individuals

GEN43: Monitor and review the rehabilitation process with the individual, their family, carers and other professionals

GEN45: Evaluate the outcomes of the individual's rehabilitation  
CHS89: Evaluate treatment plans with individuals and those involved in their care  
CHs163: manage Emergency Situations

#### **D - Supporting health care with medical devices, products and equipment**

CHS206: Adapt healthcare equipment, medical devices, assistive technology, or products to meet individual's needs  
CHS223: Fit healthcare equipment, medical devices, assistive technology, or products to meet individual's clinical needs

#### **F - Develop and share information and knowledge on health**

CHS179: Advise on requirements for choice of therapeutic intervention  
M&L A3: Develop your personal networks  
R&D8: Conduct investigations in selected research and development topics  
R&D8a: Assist in the research work

#### **G - Management and administration of health care**

M&L B6: Provide leadership in your area of responsibility  
GEN39: Contribute to effective multidisciplinary team working  
M&L D2: Develop productive working relationships with colleagues and stakeholders  
M&L D3: Recruit, select and keep colleagues  
M&L D6: Allocate and monitor the progress and quality of work in your area of responsibility  
HT4: Manage and organise your own time and activities  
CHS170: Develop clinical protocols for delivery of services  
CHS171: Develop procedures for delivery of services  
GEN23: Monitor your own work practices  
HI17: Facilitate the clinical audit process  
ICF: FS: IT communication fundamentals

#### **H - Education and learning around health**

GEN36: Make use of supervision  
GEN13: Synthesise new knowledge into the development of your own practice  
GEN35: Provide supervision to other individuals  
AC3: Contribute to the development of the knowledge and practice of others  
GEN14: Provide advice & information to individuals on how to manage their own condition

## **NOS IDENTIFIED AS RELEVANT FOR SPEECH AND LANGUAGE THERAPIST – LEVEL 7 TO LEVEL 8**

---

**No. of National Occupational Standards: 71**

### **1 - Communication (underpinning principle)**

HSC21: Communicate with, and complete records for individuals  
CHS104: Brief the team for an individual's intervention  
GEN22: Communicate effectively with individuals  
HSC369: Support individuals with specific communication needs  
HSC370: Support individuals to communicate using technology

### **2 - Equality and Diversity (underpinning principle)**

HSC3116: Contribute to promoting a culture that values and respects the diversity of individuals  
HSC234: Ensure your own actions, support the equality, diversity, rights and responsibilities of individuals

### **3 - Health safety and security (underpinning principle)**

GEN82: Check, connect and disconnect medical gas cylinders and outlets  
GEN96: Maintain health, safety and security practices within a health setting  
ENTO WRV1: Make sure your actions contribute to a positive and safe working culture  
ENTO HSS1: Make sure your own actions reduce risks to health and safety  
IPC2: Perform hand hygiene to prevent the spread of infection  
HSC22: Support the health and safety of yourself and individuals

### **4 - Safeguard and protect individuals (underpinning principle)**

CHS169: Comply with legal requirements for maintaining confidentiality in healthcare  
HSC24: Ensure your own actions, support the care, protection and well-being of individuals  
GEN63: Act within the limits of your competence and authority

### **A - Assessment and Investigation of health**

CHS40: Establish a diagnosis of an individual's health condition  
CHS118: Form a professional judgment of an individual's health condition  
CHS46: Assess risks associated with health conditions  
CHS167: Obtain valid consent or authorisation  
DYS2: Undertake a comprehensive dysphagia assessment  
DYS3: Undertake a specialist dysphagia assessment  
CHS83: Interpret the findings of healthcare investigations  
CHS220: Provide clinical interpretation from investigations  
CHS39: Assess an individual's health status  
CHS216: Assess an individual's capabilities for rehabilitation or assistive technology

### **B - Planning/preparation for and addressing of health requirements**

DYS4: Develop a dysphagia care plan  
CHS41: Determine a treatment plan for an individual  
CHS59: Respond to referrals of individuals with health conditions  
CHS99: Refer individuals to specialist sources of assistance in meeting their health care needs  
CHS122: Prepare a discharge plan with individuals  
GEN28: Discharge and transfer individuals from a service or your care  
IPC6: Use personal protective equipment to prevent the spread of infection  
CHS6: Move and position individuals  
GEN38: Arrange access to services identified in the individual's rehabilitation plan  
CHS163: Manage Emergency Situations  
CHS124: Manage and support the progress of individuals through patient pathways

CHS166: Maintain use of medical devices to assist organ or system function  
HCS\_RESP12: Establish patients on acute non-invasive ventilatory support  
CHS225: Implement a treatment plan  
CHS12: Undertake treatments and dressings related to the care of lesions and wounds  
CHS78: Administer oxygen safely and effectively  
CHS47: Monitor and assess patients following treatments  
CHS53: Evaluate the delivery of care plans to meet the needs of individuals  
GEN43: Monitor and review the rehabilitation process with the individual, their family, carers and other professionals  
GEN45: Evaluate the outcomes of the individual's rehabilitation  
CHS89: Evaluate treatment plans with individuals and those involved in their care  
CHs163: manage Emergency Situations

#### **D - Supporting health care with medical devices, products and equipment**

CHS206: Adapt healthcare equipment, medical devices, assistive technology, or products to meet individual's needs  
CHS223: Fit healthcare equipment, medical devices, assistive technology, or products to meet individual's clinical needs

#### **F - Develop and share information and knowledge on health**

CHS179: Advise on requirements for choice of therapeutic intervention  
M&L A3: Develop your personal networks  
R&D8: Conduct investigations in selected research and development topics  
R&D8a: Assist in the research work

#### **G - Management and administration of health care**

M&L B6: Provide leadership in your area of responsibility  
M&L D2: Develop productive working relationships with colleagues and stakeholders  
M&L D3: Recruit, select and keep colleagues  
M&L D6: Allocate and monitor the progress and quality of work in your area of responsibility  
HT4: Manage and organise your own time and activities  
CHS170: Develop clinical protocols for delivery of services  
CHS171: Develop procedures for delivery of services  
GEN23: Monitor your own work practices  
HI17: Facilitate the clinical audit process

#### **H - Education and learning around health**

GEN36: Make use of supervision  
GEN13: Synthesise new knowledge into the development of your own practice  
GEN35: Provide supervision to other individuals  
AC3: Contribute to the development of the knowledge and practice of others  
GEN14: Provide advice & information to individuals on how to manage their own condition

## **NOS IDENTIFIED AS RELEVANT FOR DIETITIAN – LEVEL 7 TO LEVEL 8**

---

**No. of National Occupational Standards: 77**

### **1 - Communication (underpinning principle)**

HSC21: Communicate with, and complete records for individuals

CHS104: Brief the team for an individual's intervention

GEN22: Communicate effectively with individuals

### **2 - Equality and Diversity (underpinning principle)**

HSC3116: Contribute to promoting a culture that values and respects the diversity of individuals

HSC234: Ensure your own actions, support the equality, diversity, rights and responsibilities of individuals

### **3 - Health safety and security (underpinning principle)**

GEN96: Maintain health, safety and security practices within a health setting

ENTO WRV1: Make sure your actions contribute to a positive and safe working culture

ENTO HSS1: Make sure your own actions reduce risks to health and safety

IPC2: Perform hand hygiene to prevent the spread of infection

HSC22: Support the health and safety of yourself and individuals

### **4 - Safeguard and protect individuals (underpinning principle)**

CHS169: Comply with legal requirements for maintaining confidentiality in healthcare

HSC24: Ensure your own actions, support the care, protection and well-being of individuals

GEN63: Act within the limits of your competence and authority

### **A - Assessment and Investigation of health**

CHS40: Establish a diagnosis of an individual's health condition

CHS118: Form a professional judgment of an individual's health condition

CHS46: Assess risks associated with health conditions

CHS167: Obtain valid consent or authorisation

CHS168: Obtain a patient/client history

CHS19: Undertake physiological measurements

CC01: Assess bladder and bowel dysfunction

DYS1: Undertake protocol-guided swallow screening/ assessments

CHS83: Interpret the findings of healthcare investigations

CHS39: Assess an individual's health status

### **B - Planning/preparation for and addressing of health requirements**

CHS41: Determine a treatment plan for an individual

CHS93: Agree a dietary plan for patients with a specified medical condition

CHS87: Agree rehabilitation plans with individuals, families, carers and other professionals

CHS59: Respond to referrals of individuals with health conditions

CHS99: Refer individuals to specialist sources of assistance in meeting their health care needs

CHS122: Prepare a discharge plan with individuals

GEN28: Discharge and transfer individuals from a service or your care

IPC6: Use personal protective equipment to prevent the spread of infection

CHS6: Move and position individuals

GEN38: Arrange access to services identified in the individual's rehabilitation plan

CHS163: Manage Emergency Situations

CHS124: Manage and support the progress of individuals through patient pathways

CHS15: Insert and secure nasogastric tubes

CHS166: Maintain use of medical devices to assist organ or system function

PCS17: Receive and handle clinical specimens within the sterile field  
CHS23: Carry out intravenous infusion  
CHS17: Carry out extended feeding techniques to ensure individuals' nutritional and fluid intake  
CHS225: Implement a treatment plan  
CHS12: Undertake treatments and dressings related to the care of lesions and wounds  
CHS16: Undertake care for individuals with nasogastric tubes  
CHS10: Undertake stoma care  
AH2: Prepare to, and administer medication to individuals, and monitor the effects  
CHS147: Administer oral nutritional products to individuals  
CC09: Enable individuals to effectively evacuate their bowels  
CHS47: Monitor and assess patients following treatments  
CHS92: Review and monitor a patient's nutritional wellbeing  
CHS149: Monitor and review individuals' progress in relation to maintaining optimum nutritional status  
CHS53: Evaluate the delivery of care plans to meet the needs of individuals  
GEN43: Monitor and review the rehabilitation process with the individual, their family, carers and other professionals  
GEN45: Evaluate the outcomes of the individual's rehabilitation  
CHS89: Evaluate treatment plans with individuals and those involved in their care  
CHs163: manage Emergency Situations

#### **D - Supporting health care with medical devices, products and equipment**

CHS206: Adapt healthcare equipment, medical devices, assistive technology, or products to meet individual's needs

#### **F - Develop and share information and knowledge on health**

CHS179: Advise on requirements for choice of therapeutic intervention  
M&L A3: Develop your personal networks  
R&D8: Conduct investigations in selected research and development topics  
R&D8a: Assist in the research work

#### **G - Management and administration of health care**

M&L B6: Provide leadership in your area of responsibility  
GEN39: Contribute to effective multidisciplinary team working  
M&L D2: Develop productive working relationships with colleagues and stakeholders  
M&L D3: Recruit, select and keep colleagues  
M&L D6: Allocate and monitor the progress and quality of work in your area of responsibility  
CHS170: Develop clinical protocols for delivery of services  
CHS171: Develop procedures for delivery of services  
GEN23: Monitor your own work practices  
HI17: Facilitate the clinical audit process

#### **H - Education and learning around health**

GEN36: Make use of supervision  
GEN13: Synthesise new knowledge into the development of your own practice  
GEN35: Provide supervision to other individuals  
AC3: Contribute to the development of the knowledge and practice of others  
GEN14: Provide advice & information to individuals on how to manage their own condition  
CHS159: Provide support to individuals to develop their skills in managing dysphagia

## **NOS IDENTIFIED AS RELEVANT FOR ODP – LEVEL 7 TO LEVEL 8**

---

**No. of National Occupational Standards: 94**

### **1 - Communication (underpinning principle)**

HSC21: Communicate with, and complete records for individuals  
CHS126: Conduct handover between healthcare personnel  
CHS104: Brief the team for an individual's intervention  
GEN22: Communicate effectively with individuals  
CHS48: Communicate significant news to individuals  
HSC369: Support individuals with specific communication needs

### **2 - Equality and Diversity (underpinning principle)**

M&L B11: Promote equality of opportunity and diversity in your area of responsibility  
HSC3116: Contribute to promoting a culture that values and respects the diversity of individuals  
HSC234: Ensure your own actions, support the equality, diversity, rights and responsibilities of individuals

### **3 - Health safety and security (underpinning principle)**

IPC3: Clean and remove spillages of blood and other body fluids  
IPC5: Minimise the risks of exposure to blood-borne infections while providing care  
GEN82: Check, connect and disconnect medical gas cylinders and outlets  
GEN96: Maintain health, safety and security practices within a health setting  
ENTO WRV1: Make sure your actions contribute to a positive and safe working culture  
IPC2: Perform hand hygiene to prevent the spread of infection

### **4 - Safeguard and protect individuals (underpinning principle)**

M&L B8: Ensure compliance with legal, regulatory, ethical and social requirements.  
CHS169: Comply with legal requirements for maintaining confidentiality in healthcare  
HSC24: Ensure your own actions, support the care, protection and well-being of individuals  
GEN63: Act within the limits of your competence and authority

### **A - Assessment and Investigation of health**

CHS118: Form a professional judgement of an individual's health condition  
CHS4: Undertake tissue viability risk assessment for individuals  
CHS167: Obtain valid consent or authorisation  
CHS24: Carry out arterial puncture and collect arterial blood  
CHS25: Carry out blood collection from fixed or central lines  
CHS132: Obtain venous blood samples  
CHS192: Perform standard tests using an automated analyser  
CHS19: Undertake physiological measurements  
CHS217: Perform point of care testing  
CHS83: Interpret the findings of healthcare investigations  
CHS39: Assess an individual's health status  
CHS120: Establish an individual's suitability to undergo an intervention

## **B - Planning/preparation for and addressing of health requirements**

CHS99: Refer individuals to specialist sources of assistance in meeting their health care needs  
PCS13: Prepare & dress for scrubbed clinical roles  
IPC6: Use personal protective equipment to prevent the spread of infection  
CHS6: Move and position individuals  
PCS23: Assist in the transfer and positioning of patients within the perioperative environment  
GEN6: Manage environments and resources for use during healthcare activities  
PCS25: Carry out delegated activities in the anaesthetic environment/Post Anaesthetic Care Unit (PACU)  
PCS14: Prepare surgical instrumentation & supplementary items for the surgical team  
PCS21: Prepare equipment for processing salvaged blood  
CHS101: Organise the collection and receipt of blood / blood products for transfusion  
HCS2: Preparation of products for use within healthcare activities  
PCS16: Provide surgical instrumentation and items for the surgical team and maintain the sterile field  
PCS2: Contribute to the safe use of medical devices in the perioperative environment  
CHS163: Manage Emergency Situations  
CHS124: Manage and support the progress of individuals through patient pathways  
CHS22: Perform intravenous cannulation  
CHS166: Maintain use of medical devices to assist organ or system function  
PCS6: Measure and record patients' body fluid output  
PCS10: Carry out delegated activities in receiving, handling and dispatching clinical specimens  
PCS17: Receive and handle clinical specimens within the sterile field  
CHS23: Carry out intravenous infusion  
EUSC20: Use pre-planned methods to manage blood loss  
EUSC28: Extract excess fluids from an individual  
CHS165: Manage fluid levels and balance  
PCS20: Operate equipment for intra-operative blood salvage and collect blood  
PCS22: Operate and monitor equipment for processing salvaged blood and complete salvaged blood processing  
PCS18: Prepare, apply and attach dressings, wound supports and drains to patients  
CHS14: Remove wound closure materials from individuals  
CHS12: Undertake treatments and dressings related to the care of lesions and wounds  
CHS13: Undertake wound drainage care  
EUSC25: Monitor the individual within the critical care environment  
EUSC26: Care for the individual within the critical care environment  
EUSC50: Monitor and maintain the status of an individual during their post intervention transportation  
CHS11: Undertake personal hygiene for individuals unable to care for themselves  
AH2: Prepare to, and administer medication to individuals, and monitor the effects  
EUSC19: Administer pharmaceutical interventions  
CHS78: Administer oxygen safely and effectively  
CHS1: Receive and store medication and products  
HSC224: Observe, monitor and record the conditions of individuals  
PCS5: Assist in the support and monitoring of patients within the perioperative care environment  
EUSC49: Provide care for individuals as they recover from invasive interventions  
CHS47: Monitor and assess patients following treatments

## **D - Supporting health care with medical devices, products and equipment**

HCS\_A6: Confirm sufficiency and suitability of clinical equipment and resources required for procedure  
CHS224: Set up equipment to monitor physiological function

## **E - Provision of facilities, estates and logistics for health care**



DEC1: Collect used equipment from designated collection point  
DEC4: Prepare re-usable medical devices for sterilisation  
DEC5: Carry out sterilization and disinfection of re-useable medical devices  
IPC7: Safely dispose of healthcare waste, including sharps, to prevent the spread of infection  
PCS1: Prepare for and transport patients to, within and from the perioperative care environment  
EC23: Evacuate and transport individuals who require emergency transport to suitable locations for treatment/intervention/care

#### **F - Develop and share information and knowledge on health**

CHS179: Advise on requirements for choice of therapeutic intervention

#### **G - Management and administration of health care**

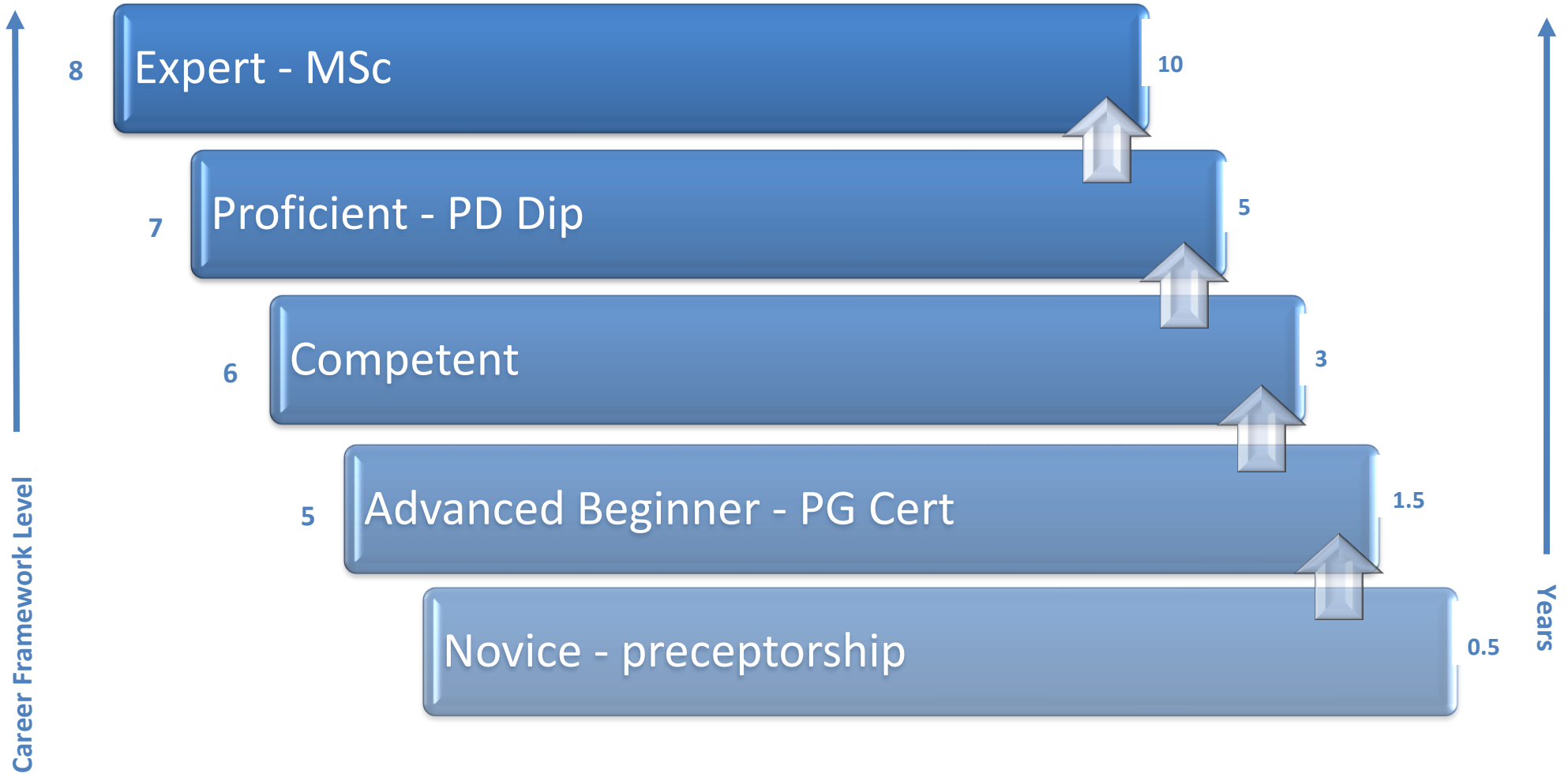
M&L B5: Provide leadership for your team  
M&L C2: Encourage innovation in your area of responsibility  
GEN39: Contribute to effective multidisciplinary team working  
M&L D1: Develop productive working relationships with colleagues  
GEN65: Make recommendations for the use of physical resources  
M&L E2: Manage finance for your area of responsibility  
CHS170: Develop clinical protocols for delivery of services  
CHS171: Develop procedures for delivery of services  
DEC6: Monitor procedures and operate tracking systems and procedures  
ICF: FS: IT communication fundamentals

#### **H - Education and learning around health**

GEN13: Synthesise new knowledge into the development of your own practice  
AC3: Contribute to the development of the knowledge and practice of others

These lists of National Occupational Standards have been identified as relevant for professions working in the Critical Care environment, and are intended for reference. They are not prescriptive and do not relate to any one specific job or role.

The full text of the NOS can be found on the Skills for Health website. [www.skillsforhealth.org.uk](http://www.skillsforhealth.org.uk)



## APPENDIX XI – PROJECT EVALUATION

### Project Evaluation

We would like to thank you for all the hard work you have put into this project over the past 12 months. The Project Team would be grateful for your opinions.

#### Q1. Do you feel this project has been worthwhile?

No		Maybe		Yes
1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

#### Q2 What worked well?

.....

.....

.....

#### Q3. What could have been better?

.....

.....

.....

#### Q4. Would you support the implementation of competence based education and training?

No		Maybe		Yes
1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

#### Q5. Do you have any other comments?

.....

.....

.....

## APPENDIX XII – GLOSSARY OF TERMS

AHP	Allied Health Professional
AP	Assistant Practitioner
CoCH	Countess of Chester Hospital
CF	Career Framework
CMCCN	Cheshire and Mersey Critical Care Network
E Ches	East Cheshire Hospitals Trust
HCA	Health Care Assistant
HEI	Higher Education Institute
ICS	Intensive Care Society
KSF	Knowledge and Skills Framework
LHCH	Liverpool Heart and Chest Hospital
LWH	Liverpool Women’s Hospital
M Ches	Mid Cheshire Hospitals Trust
NHS	National Health Service
NICE	National Institute for Health and Clinical Excellence
NOS	National Occupational Standard
ODP	Operating Department Practitioner
OT	Occupational Therapist
Physio	Physiotherapist
RLBUHT	Royal Liverpool and Broadgreen University Hospitals Trust
RGN	Registered General Nurse
SALT	Speech and Language Therapist
S&O	Southport and Ormskirk Hospitals Trust
SfH	Skills for Health

St H&K	St Helens and Knowsley Foundation Trust
SHA	Strategic Health Authority
UKCES	United Kingdom Commission for Employment and Skills
VLE	Virtual Learning Environment
Warr	Warrington Hospital

