WHO Europe Anaesthetic Nursing Curriculum

WHO European Strategy for Continuing Education for Nurses and Midwives

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CONTENTS

Introduction ...................................................................................................................................................1

Context ..........................................................................................................................................................1
   The need for a Continuing Education Strategy ...................................................................................1
   The aim and purpose of the Continuing Education Strategy ..............................................................2
   Background to the Continuing Education Strategy .............................................................................2
   The Health Care context .....................................................................................................................4

Anaesthetic Nursing Curriculum...................................................................................................................6
   1. Anaesthetic Nursing .........................................................................................................................6
      1.1 The Anaesthetic Nurse ..............................................................................................................6

   2. The Anaesthetic Nursing course .................................................................................................7
      2.1 Aims .......................................................................................................................................7
      2.2 Structure, length and mode of delivery ....................................................................................7
      2.3 Entry requirements ..................................................................................................................7
      2.4 Competencies or learning outcomes ........................................................................................7
      2.5 Curriculum Content ............................................................................................................. 9
      2.6 Teaching/learning and assessment strategies ..........................................................................9
      2.7 Supervision of practice .........................................................................................................11
      2.8 Optimum student intake and teacher/student ratio ................................................................11
      2.9 Accreditation with ECTS points ..........................................................................................11
      2.10 Quality control and evaluation ..........................................................................................11

   3. Teachers and mentors .......................................................................................................................12

   4. Location of the course .......................................................................................................................12

   5. Qualification on successful completion of the course .....................................................................12

   6. Course overview – Modules One to Six .........................................................................................12
      MODULE ONE ................................................................................................................................14
      MODULE TWO ...............................................................................................................................16
      MODULE THREE ..........................................................................................................................18
      MODULE FOUR ............................................................................................................................21
      MODULE FIVE ...............................................................................................................................23
      MODULE SIX ...............................................................................................................................25
Introduction

This Anaesthetic Nursing curriculum has been prepared for WHO Europe as one of several post-qualifying curricula, requested by some Member States, to assist them in their progress towards implementation of the WHO European Region Continuing Education Strategy for Nurses and Midwives (WHO 2003). The Anaesthetic Nursing curriculum document therefore commences with a description of the context for the Continuing Education Strategy.

Context

The WHO European Region Continuing Education Strategy for Nurses and Midwives is set firmly within the context of the Second WHO Ministerial Conference on Nursing and Midwifery in Europe, which addressed the unique roles and contributions of Europe’s nurses and midwives in health development and health service delivery (WHO 2001). At that Conference of Ministers of Health of Member States in the European Region, the Munich Declaration “Nurses and Midwives: A Force for Health” (WHO 2000a) was signed, and this key document, together with the WHO European Strategy for Nursing and Midwifery Education (WHO 2000) form the context for the Continuing Education Strategy.

The need for a Continuing Education Strategy

Nurses and midwives together constitute the largest proportion of the health care workforce in all countries of the WHO European Region, numbering approximately six million at the start of this new century. The service they provide covers 24 hours of every day of the year. It is imperative that they are competent to provide the highest quality of nursing and/or of midwifery care. In order to do this, their initial nursing and midwifery education must be such that the people of their nation can be assured of their competence to practise on entry to their professions of nursing and midwifery, and that the foundation has been laid for them to continue to learn throughout their professional lives. Maintenance and further development of competence is essential to the ongoing provision of high quality nursing and midwifery care. In the rapidly changing health care services of today, with the knowledge explosion and the impact of technology upon health care, many nurses and midwives are increasingly called upon to work in expanded, specialist and/or advanced practice roles. The WHO European Strategy for Continuing Education for nurses and midwives has been developed in order to assist Member States to ensure the continuing competence of their nursing and midwifery workforce. In some cases this will be by developing new knowledge for specialist fields of clinical nursing and midwifery practice, in others by deepening their knowledge of an existing field of practice, and in yet others by gaining new competencies in the field of nursing and/or midwifery education, management or research.

The Continuing Education Strategy does not stand alone. Firstly, it builds upon the firm foundation provided by the WHO European Strategy for Nursing and Midwifery Education (WHO 2000), in which the link between initial and continuing education is clearly stated:

The initial programme of education must prepare nurses and midwives who are not only competent to practise in today’s health services, but who value and are committed to maintaining that competence. This they will achieve through continuing to update their knowledge, skills and
Secondly, its principles are in harmony with continuing education developments in nursing more generally in Europe and worldwide and with the growth of specialization in nursing. The International Council of Nurses (ICN) considered specialization as implying a deeper level of knowledge and skill in a specific aspect of nursing than would be acquired in initial nursing education (International Council of Nurses 1987 and 1992). The European Commission’s Advisory Committee on Nursing (Commission of the European Communities 1994) recommended that specialist educational preparation was necessary in order to prepare qualified nurses to continue to meet the changing and increasingly complex needs of patients for whom advanced technology was enabling new treatment regimes, with resulting advanced practice roles for nurses. ENNO, the European Network of Nursing Organizations (2000) advocates a European Framework for Specialist Nursing Education, in recognition of the reality that the field of nursing knowledge and skills has become too vast and complex for any one individual to master in full. If quality of care is to be ensured, then specialization within nursing is essential, and they cite European Directives 89/48/CEE and 92/51/EEC, as amended in 1997, as the directives which are appropriate for specialist nurses (European Network of Nursing Organizations 2000).

**The aim and purpose of the Continuing Education Strategy**

The key aim of the strategy is to ensure fitness for purpose of each Member State’s nursing and midwifery workforce. Ongoing competence to practise can only be achieved by a commitment to lifelong learning on the part of all nurses and midwives. However, that personal and professional commitment can only be realized if each Member State accepts its obligation to ensure, or set in place plans to ensure that opportunities for continuing education are provided, and that the requirement for nurses and midwives to maintain their competence is regulated under legislation, in order to support safe, up-to-date and evidence-based practice.

The purpose of the Continuing Education Strategy is therefore twofold; it is both visionary and pragmatic. It provides the vision that will help shape the philosophy of continuing education in nursing and in midwifery, often termed continuing professional development, and it outlines and/or confirms some fundamental guiding principles. If followed, these principles should enable Member States to set up, or further develop existing systems of continuing education. In turn, this will enable nurses and midwives to maintain their competence and so feel confident that their knowledge, skills and attitudes are “fit for purpose” in the multiprofessional team in the health care services of which they are an essential part.

**Background to the Continuing Education Strategy**

Of crucial importance to the implementation of the Continuing Education Strategy is the implementation by Member States of the WHO education strategy for initial nursing and midwifery education. Of equal importance is the belief, which underpins both strategies, that education and practice are very closely related. Education and practice must move ahead together, in mutual respect and partnership, with shared values and goals. This is essential to the provision of an appropriate quality of cost-effective and efficient nursing and midwifery care and of health promotion for all the people of the Member States of the WHO European Region. This progress and partnership must be achieved within the changing structures of health care priorities.
and provision in the different Member States, many of which are undergoing major political, economic, social and demographic change and are in the midst of health care reforms. Although some of these differences can be significant, the shared values were clearly demonstrated at the Second WHO Ministerial Conference on Nursing and Midwifery in Europe (WHO 2001) when, in The Munich Declaration (WHO 2000a), Ministers of Health stated their belief that:

Nurses and midwives have **key and increasingly important roles** to play in society’s efforts to tackle the public health challenges of our time, as well as in ensuring the provision of high quality, accessible, equitable, efficient and sensitive health services which ensure continuity of care and address people’s rights and changing needs (WHO 2000a).

In the “Munich Declaration” which was issued by Ministers at the Conference all relevant authorities were urged to “step up their action” in order to strengthen nursing and midwifery by:

- ensuring a nursing and midwifery contribution to decision-making at all levels of **policy** development and implementation;
- addressing the **obstacles**, in particular recruitment policies, gender and status issues, and medical dominance;
- providing financial incentives and opportunities for **career advancement**;
- improving initial and continuing **education** and access to higher nursing and midwifery education;
- creating **opportunities for nurses, midwives and physicians to learn together** at undergraduate and postgraduate levels, to ensure more cooperative and interdisciplinary working in the interests of better patient care;
- supporting research and dissemination of information to develop the **knowledge and evidence base** for practice in nursing and midwifery;
- seeking opportunities to establish and support **family-focused community nursing and midwifery** programmes and services, including, where appropriate, the Family Health Nurse;
- enhancing the roles of nurses and midwives in **public health, health promotion and community development** (WHO 2000a).

Of the above actions, those of direct relevance to the Continuing Education Strategy are the need to improve continuing education and access to higher nursing and midwifery education; to create opportunities for nurses, midwives and physicians to learn together at both undergraduate and postgraduate levels in order to ensure more cooperative and interdisciplinary working in the interests of better patient care; to support research and dissemination of information in order to develop the knowledge and evidence base for practice; to provide financial incentives and opportunities for career advancement; and to ensure nurses and midwives contribute to decision-making at all levels of policy development and implementation.

On a worldwide basis, at the Fifty-fourth World Health Assembly in May 2001, delegates from the 191 countries present stressed the crucial and cost-effective role of nurses and midwives in reducing mortality, morbidity and disability in populations, in caring for those who are ill and in promoting healthier lifestyles (WHO 2001a).
If nurses and midwives are to fulfil these key roles to their maximum potential, if they are to work effectively in partnership with others in the health care team, then it is imperative that they build systematically upon their initial nursing and midwifery education, continuing their professional education in ways which ensure they maintain competence to meet the needs of the people of their nations for health care.

The Health Care context

As the Continuing Education Strategy was being prepared, all governments across Europe continued to face a wide range of complex health problems. Although in each Member State the existence and the severity of these problems varies, they include environmental pollution; the increasing gap between the rich and the poor; unacceptable levels of maternal and child morbidity and mortality; and a resurgence of diseases thought to have been conquered such as, for example, tuberculosis, cholera, typhoid fever and malaria. There are increases in the level of chronic illness, including cancer, cardiovascular diseases and mental health disorders; in lifestyle-related problems such as unhealthy diet, lack of exercise, smoking, alcohol and substance misuse and in sexually transmitted diseases. In some parts of the Region, wars and ethnic conflict continue to cause intense suffering, increasing numbers of refugees and homeless people and disruption to society’s essential infrastructures. There are also the major challenges for health care systems which are inherent in the changing demography, i.e. the steady increase in the proportion of elderly people in the population which, in some Member States, is compounded by a gradual decrease in the proportion of those who normally contribute to the gross domestic product through working.

The future is likely to see continuing reforms of the health sector. These include a greater involvement of citizens and the community in decision-making about care; more people cared for at home and therefore a growing demand for community-based health services; a steady increase in the availability of new treatments and therapies; increasing costs of providing care; and more and more ethical challenges. However, whatever the reforms and changes, care which is centred upon the individual will remain the starting point of the health care organization and of the work of all nurses and midwives.

Continuing advances in practice, in the evidence base and in the quality of care required make it imperative that the capabilities of the nursing and midwifery workforce are regularly updated, and that there is a commitment by Member States to ensure provision of appropriate continuing education. Effective implementation of the role of the nurse and of the midwife as outlined in the Strategy for Nursing and Midwifery Education is the essential first step. Effective implementation, or setting in place of plans to achieve implementation of the Strategy for Continuing Education is also essential if the workforce is to be prepared for the necessary specialist and advanced practice roles which the developments outlined above demand. Member States will be required to regularly evaluate and, if necessary, update their existing continuing education provision, to keep pace with the priority of maintaining a nursing and midwifery workforce which is fit for purpose, and which remains fit for purpose.

Just as “health care does not take place in isolation from political, economic and cultural realities” (WHO 1996), so nursing and midwifery education and practice do not take place in isolation from the political, social, economic, environmental and cultural realities of the Member States; neither must they be seen in isolation from the various stages of health care reform and the dynamic nature, or otherwise, of progress. Figure 1 depicts that complexity.
Likewise, nurses and midwives do not practise in isolation from their colleagues in the other health care professions. Although each profession contributes unique knowledge and skills to health promotion, the care of patients and to the health care system as a whole, there is a need for much more multidisciplinary and interdisciplinary work, in a spirit of recognition and respect for each other’s authority, responsibility, ability and unique contribution. Thus, nurses and midwives must continue to build upon their initial professional education so as to continue to take their full part as members of the multiprofessional health care team, sharing both in decision-making and, when appropriate, in taking responsibility for leadership of the team and for the outcomes of the work of the team.

The Member States of the WHO European Region need well prepared, up-to-date, competent nurses and midwives, who participate in lifelong learning and who are able to work confidently, maintaining professional standards of care as the sound basis for multiprofessional collaboration and partnership with patients, healthy individuals, families and communities.
Anaesthetic Nursing Curriculum

All Member States are reminded that this is a sample curriculum. It should be used as guidance and be adapted as necessary to meet the Member State’s specific priorities and needs for Anaesthetic Nursing.

1. Anaesthetic Nursing

Advances in surgical techniques, in technology such as ventilators to support respiration, in anaesthesia and in monitoring equipment have made it possible to operate on patients who, until relatively recently, would certainly have died as a result of their illness or injury/ies. Many more operations are now carried out, some of major severity, including transplant surgery, cardiac bypass surgery, various types of cancer surgery and surgery in major trauma. Advances in anaesthetics have meant not only a speedier recovery from general anaesthesia but the possibility to anaesthetize a local area so that the patient can remain awake throughout surgery, thus, for example, minimizing the risk of respiratory complications.

The care of patients who have surgery commences at the first consultation, when decisions are made about the diagnosis and proposed treatment, and continues throughout their “journey of care”, i.e. preparation for surgery, anaesthesia and the operation, recovery and discharge. The operating theatre team is a multidisciplinary team, consisting of surgeons, anaesthetists, theatre nurses, anaesthetic nurses and, in some cases, assistants or auxiliary staff. The curriculum which is presented in this document deals with the education and training of the anaesthetic nurse.

1.1 The Anaesthetic Nurse

The anaesthetic nurse will have successfully completed specialist post-qualification education in anaesthetic nursing, which builds upon initial generalist nursing education. In meeting the complex needs of patients who are undergoing surgery and anaesthesia, such nurses require a well-developed knowledge base, along with specialist skills in both the technological and the caring dimensions of anaesthetic nursing. They must be equipped with the expertise to make sound and often rapid clinical judgements within the operating theatre/clinical care environments and to recognize and deal with the professional and ethical issues inherent in these environments. The anaesthetic nurse may work only in the theatre environment, assisting the anaesthetist with induction, maintenance and reversal of anaesthesia, but that is a rather restrictive role. It is more usual to find the anaesthetic nurse undertaking a holistic role, and, while responsible for assisting the anaesthetist and sharing the care of the patient with the anaesthetist throughout the period of time when the patient is anaesthetized, also undertaking, along with the theatre nurses, the care of a patient from his/her preparation for surgery, throughout anaesthesia and the acute stage of the recovery process, i.e. until the patient is deemed fit to be discharged to the ward setting.

This course and curriculum aims to prepare an anaesthetic nurse who will be competent to meet the demands of that role.

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1 It is important to distinguish between the anaesthetic nurse whose role is outlined above and clearly described in the curriculum, and the “nurse anaesthetist”. The nurse anaesthetist has a different role and therefore requires a different educational preparation (International Federation of Nurse Anaesthetists [IFNA] 1999).
2. **The Anaesthetic Nursing course**

2.1 **Aims**

The aims of the course and of the curriculum are to:

- provide an advanced educational experience which will develop the student’s intellectual and imaginative abilities in order to facilitate the development of independent judgement and problem-solving skills;
- provide an educational framework that will encourage the student to develop her/his skills of analysis and critical awareness in order to stimulate an enquiring and creative approach to both the theory and practice of anaesthetic nursing;
- develop the student’s ability to respond to changing needs in anaesthetic nursing in an analytical way;
- develop the student’s awareness of relevant research findings and facilitate integration of these findings into anaesthetic nursing practice.

2.2 **Structure, length and mode of delivery**

The curriculum is structured in modules or units of study, several of which combine both theory and practice elements. The length of the course must be sufficient to enable the student, on successful completion, to achieve the specified competencies or learning outcomes, the academic award and the specialist nurse qualification relevant to the course, and is normally of 40 weeks. Each week of the course is calculated as comprising 30 hours, which gives a total of 1200 hours. The preferred mode of delivery is full-time. Flexibility to deliver the course in a part-time mode or by distance/on-line learning should be open to negotiation, depending upon each Member State’s resources.

The course is based on the philosophy of the anaesthetic nurse as a reflective, lifelong learner (Figure 2, Section 2.6). It emphasises the importance of the integration of theory and practice, which should be evidence-based.

2.3 **Entry requirements**

Course participants will be nurses who have successfully completed an initial nursing education programme, as described in the WHO European Strategy for Nursing and Midwifery Education entitled “Nurses and midwives for health: A WHO European strategy for nursing and midwifery education” (WHO 2000) or its equivalent. They should have a minimum of two years post-qualifying experience.

2.4 **Competencies or learning outcomes**

The competencies or learning outcomes of the course have been developed to demonstrate achievement of both theoretical and clinical learning in the following areas:

- Specialist clinical practice
- Care and programme management
- Clinical practice leadership
- Clinical practice development.

These are detailed in the Continuing Education Strategy (WHO 2003) and are based upon the United Kingdom Central Council for Nursing, Midwifery and Health Visiting (UKCC 1998) standards for specialist education and practice. Underpinning knowledge will be delivered in the theoretical component of the course and the students will be expected to integrate and apply this knowledge in anaesthetic nursing practice.

On successful completion of the course, the student will be competent to:

- demonstrate application of knowledge and understanding of the potential implications of surgery and anaesthesia for individual patients;
- demonstrate application of knowledge and understanding of physiological responses to anaesthetic and peri-operative procedures;
- demonstrate safe and skilled support for the anaesthetist to ensure management of/minimizing risk to the patient’s airway;
- ensure ethical guidelines are adhered to, for example in relation to patient confidentiality and informed consent;
- where required, take responsibility for verifying patient identity prior to surgery being carried out;
- evaluate the impact of legal and ethical issues in the management of nursing care of the anaesthetized patient;
- conduct an analysis of the peri-operative environment to assess risks/hazards and to promote optimum safety for patients and staff;
- implement policies for infection control;
- recognize, monitor and assist in an anaesthetic emergency in the operating theatre, or in any other location where anaesthetic emergencies may occur;
- demonstrate knowledge of location and contents of emergency trolley and the variety of emergency procedures;
- assess, plan, implement and evaluate individualized and holistic care of patients, during preparation for surgery, induction of anaesthetic, while anaesthetized and while recovering from the anaesthetic;
- ensure safe transfer to the ward with all relevant documentation;
- assess, plan and provide appropriate care to enhance the emotional wellbeing of patients and families coping with the stress of surgery, utilizing skills of therapeutic communication;
- follow legal guidelines for administration of medicines when working with drugs and anaesthetic agents during induction, maintenance, reversal and postoperative phases of patient care;
- complete relevant operating theatre documentation and all nursing documentation accurately and in a timely fashion;
- demonstrate application of knowledge and understanding of the potential implications of specialist surgery and of specialist anaesthetic techniques for individual patients;
- demonstrate effective physical and psychological support to individual patients undergoing regional anaesthesia, i.e. the patient is awake;
- demonstrate safe and skilled support for the anaesthetist during all types of anaesthesia;
- integrate knowledge of hazards, pharmacology and surgery to contribute effectively to a patient’s safe recovery from anaesthesia;
- monitor patient recovery to ensure early detection and treatment of any complication and/or deterioration in their condition and initiate treatment/referral to relevant member of the clinical team;
- utilize evidence-based pain assessment tools to ensure effective pain monitoring and control;
- educate and support those patients who are using patient-controlled analgesia, to ensure effective pain control;
- assess fitness for discharge from the recovery room back to the ward;
- accept accountability and responsibility for her/his own professional judgment and actions;
- demonstrate management and leadership skills in practice, including the ability effectively to contribute to the management of change;
- reflect upon and critically evaluate her/his own practice;
- undertake supervision and mentoring of a junior colleague, applying principles of adult learning theories;
- practise at all times in accordance with the law governing nursing and, where existing, the Code of Professional Conduct;
- give evidence of a commitment to her/his own learning and continuing professional development.

### 2.5 Curriculum Content

The curriculum will be delivered in a series of six modules. In order to complete the course, the student must successfully complete all modules. While all of the modules offer the knowledge needed to develop a reflective and competent anaesthetic nurse, four short modules, together totalling eight weeks (12 ECTS points), modules one, two, four and five focus on generic transferable knowledge and skills which are applicable for all nurses working in a specialist role. These modules form the “core curriculum” and feature as part of all the other WHO European Specialist Nursing curricula. The major part of the course, i.e. two modules each of 16 weeks (24 ECTS points), giving a total of 32 weeks (48 ECTS points), is specific only to Anaesthetic Nursing.

### 2.6 Teaching/learning and assessment strategies

These strategies will stimulate learning at all six levels of cognitive skills, as described by Bloom (1956) in his seminal text. The teaching/learning and assessment strategies employed in the course should be congruent with the principles of androgogy, the rationale for which is that teachers and students will bring to the course existing competencies – relevant knowledge, skills and attitudes – to contribute to a mutually educative process. Overall, emphasis will be placed on interactive approaches. Active student participation, facilitated by nurse teachers (who have a
role both in the university setting and in operating theatre nursing practice) and by mentors (in operating theatres/clinical areas) is considered to be the optimum way of achieving learning outcomes. There will continue to be a place for the didactic lecture, but it is envisaged that this will constitute a relatively minor proportion of the curriculum. The latest educational technology available in the particular Member State, including where feasible on-line or E-learning and video-conferencing, should be used to enhance teaching and learning.

A key objective will be the use of “reflection” as a means of learning from and developing expert practice (Figure 2). This will require the student to maintain a reflective diary/journal for the duration of the course. Case studies, critical incidents and care scenarios will form the focus for a reflective, problem-solving approach to learning.

Assessment methods should be supportive of the adult learning approach, should promote the integration of theory and practice, be research/evidence based and include a variety of methods. Assessment will enable the measurement of the student’s progress and achievement in relation to the prescribed competencies/learning outcomes of the anaesthetic nursing course.

The success of the teaching/learning and assessment strategies will depend on the availability and deployment of appropriately qualified and prepared nurse educators who are committed to the philosophy of adult learning approaches. In addition, such interactive and problem-solving approaches must be supported by an environment which is conducive to learning. This must include attention to the provision of adequate space, library facilities and other technological resources, all of which should be borne in mind at the planning stage.
2.7 Supervision of practice

Operating theatre/clinical practice should be undertaken under the auspices of a suitably experienced anaesthetic nurse, who will ensure that the students gain the relevant experience during the period of operating theatre/clinical practice. The clinical practice assessment should be designed to demonstrate achievement of the clinical learning outcomes.

Supervisors are responsible for guiding students through operating theatre/clinical practice periods as well as making an assessment of the student’s competence to practise by the end of the operating theatre/clinical experience. The course leader should retain responsibility for the student throughout this period and should liaise with the student and supervisor as appropriate.

2.8 Optimum student intake and teacher/student ratio

As interactive adult teaching/learning and assessment strategies will be used throughout the course, which will include the requirement for operating theatre/clinical supervision, the optimum intake per course is likely to be 30 students. The ideal teacher-student ratio should not exceed 1:10, i.e. one teacher per ten students.

2.9 Accreditation with ECTS points

Each module is assigned credit points using the European Credit Transfer System (ECTS). The ECTS system has been chosen because the European Community Directives guide nursing and midwifery education for all European Union (EU) countries and those accession countries which become members of EU (European Commission 1989). Credits are “a numerical value allocated to course units (modules) to describe the student workload required to complete them” (European Commission 1995). In other words the number of points does not reflect only the direct contact hours, e.g. while the student is attending a lecture, seminar, practical skills demonstration or tutorial and is in direct contact with the teacher, but also includes the number of hours which the student is expected to devote to independent study or practising of skills. Credit points take into account the learning in both the university, i.e. the theory component of a module, and in practice placements. The total number of ECTS credits for an academic year is 60. Their apportionment per module reflects the length of that module, calculated in weeks and number of hours. A week is taken as comprising 30 hours, and 20 hours equates to one ECTS credit point. Thus, a two-week, 60-hour module earns three credit points and a 16-week, 480-hour module earns 24 credit points. The overall length of the course is 40 weeks or 1200 hours which equate to 60 ECTS credit points. Further information on this system and its application to nursing education can be found in Section 8 of the Guidelines prepared to assist Member States with implementation of the initial Education Strategy (WHO 2001b).

2.10 Quality control and evaluation

External audit will be essential to evaluate the quality and standards of the course, as evidenced by the curriculum design, the teaching/learning strategies, the marking of student assessments and the results in both academic work and in practice learning outcomes. Curriculum evaluation should be carried out by teachers, students and also by those providing the service, i.e. operating theatre/anaesthetic nursing managers and existing anaesthetic nurses.
3. Teachers and mentors

The types of teaching/learning and assessment strategies considered essential for this curriculum are challenging for teachers, mentors and students. It is therefore important, if they are to be effectively delivered, that only qualified nurse teachers and mentors are involved. The setting up of structures to ensure peer group support and close liaison between teachers and mentors will be particularly important in the early years, as there may be no role models either in education or in practice.

Teachers of the anaesthetic nursing course must:

- hold a degree at an academic level equivalent to the requirements for university or equivalent institute teachers in the country;
- hold a teaching qualification in order to apply appropriately the full range of research-based teaching, learning and assessment strategies within the theory and clinical components of the curriculum;
- hold the qualification to which the programme leads, or be able to provide evidence of updating of knowledge, skills and attitudes relevant to anaesthetic nursing;
- teach and/or work within operating theatres/anaesthetic nursing;
- take responsibility for the clinical supervision of the nurse on practice placement, and share this responsibility with their clinical mentor.

The anaesthetic nurse who is acting as mentor must be experienced in anaesthetic nursing and must hold the appropriate academic qualification.

4. Location of the course

The theoretical component of the course should be delivered in a university or equivalent institute. Practice elements will take place in operating theatres and clinical settings where patients are being prepared for surgery and/or are recovering from surgery.

5. Qualification on successful completion of the course

On successful completion of the curriculum the nurse will receive the specialist qualification and postgraduate academic award of “Anaesthetic Nurse”. The specialist qualification will be formally recorded in accordance with the country’s legislative and regulatory system for nursing and nurses.

6. Course overview – Modules One to Six

An overview of the curriculum, and descriptions of the modules which comprise the curriculum are given in the following pages. It should be noted that a number of concepts and subjects introduced in one module are revisited and further developed in another. As knowledge and
experience are gained, students will be able to view these concepts and subjects from different aspects and build upon their earlier learning and experience.

## ANAESTHETIC NURSING CURRICULUM

### OVERVIEW

<table>
<thead>
<tr>
<th>Module One</th>
<th>Module Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRODUCTORY MODULE: Concepts, Practice and Theory</td>
<td>INFORMATION MANAGEMENT AND RESEARCH</td>
</tr>
<tr>
<td>2 weeks – 60 hours ECTS credits – 3</td>
<td>2 weeks – 60 hours ECTS credits – 3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Module Three</th>
<th>Module Four</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANAESTHETIC NURSING I</td>
<td>DECISION-MAKING</td>
</tr>
<tr>
<td>16 weeks – 480 hours ECTS credits – 24</td>
<td>2 weeks – 60 hours ECTS points – 3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Module Five</th>
<th>Module Six</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEADERSHIP AND MANAGING RESOURCES</td>
<td>ANAESTHETIC NURSING II</td>
</tr>
<tr>
<td>2 weeks – 60 hours ECTS points – 3</td>
<td>16 weeks – 480 hours ECTS points – 24</td>
</tr>
</tbody>
</table>
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Anaesthetic Nursing Curriculum

MODULE ONE

Title: Introductory Module
Concepts, Practice and Theory

Duration: 2 weeks – 60 hours

ECTS Credit points: 3

Module Content Summary

This module introduces the student to the key concepts which have shaped the anaesthetic nursing curriculum. The approach will encourage the student to build upon, integrate and expand their existing knowledge, skills and experience using the new knowledge and experiences which will be gained as a result of studying the curriculum. The close relationship between the practice of nursing and the theoretical and research knowledge related to nursing will be explored using examples from anaesthetic nursing. The teaching and learning strategies will encourage the nurse to get to know her fellow students and to share professional knowledge and experiences. The value of debate about the relevance of the theoretical content to anaesthetic nursing practice will be explored.

This module will take place in the university setting or equivalent institute setting.

Syllabus

The Anaesthetic Nurse
Typical care scenarios
The competency-based and research-based curriculum
Concept of competence
Andrology – appropriate teaching and learning strategies for students and for adult patients
Facilitation of learning
Problem-solving
Teamwork
Debating as a form of constructive challenge
Analytical and critical thinking and its relationship to the practice of anaesthetic nursing
Continuing professional development/lifelong learning
**Competencies or Learning Outcomes**

On completion of this module, the student will be able to demonstrate:

- understanding of how previous learning and experience can inform and enrich the new knowledge and skills necessary for the practice of anaesthetic nursing;
- knowledge of a variety of teaching and learning strategies which may be appropriate to the education of nurses and of patients and their carers;
- an understanding of competence and its relevance in nursing practice and in the team approach to care;
- an analytic and critical approach to discussion and constructive debate about nursing issues;
- a commitment to lifelong learning and continuing professional development.

**Reading List**

WHO publications
National and international literature covering the syllabus
Where accessible – on-line and distance learning materials

**Teaching/learning Strategies**

Lecture (key concepts)  Case studies
Reflective exercises       Seminars
Group work               Debate and discussion

**Assessment Methods**

Dates on which assignments are due: ............................

Format of assignment:
Examination – multiple choice and short answer questions – 50% of whole
Short essay – approximately 600 words – 50% of whole
The student will choose a concept from those listed in the syllabus and discuss the relevance of the chosen concept to her personal understanding, at this early stage of the course, of what will be expected of her as a qualified Anaesthetic Nurse.

Examination: Mark awarded .................... %
Essay: Mark awarded .............................. %

Aggregate mark for module (out of 100%) .........................%
Module Content Summary

This module will enable students to extend their knowledge in relation to applied aspects of information management and research. It will develop their understanding of approaches to information management and the research process, ethical issues in relation to obtaining informed consent from participants in research, confidentiality and security of data and the communication of results of relevance to practice. The research component will have a particular focus on studies and evidence which contribute to knowledge within the field of anaesthetic nursing.

80% (8 days) of this module will be based in the university or equivalent institute setting. 20% (2 days) of this module will be based in operating theatres/clinical practice.

Syllabus

Sources/types of information, knowledge and evidence
Analytical and critical thinking, critical appraisal and constructive questioning of practice
The research process, research design and methods
Basic statistics – interpreting demographic and statistical data, summarizing data and drawing conclusions
Identifying and measuring outcomes
Information management and information technology
Documentation – structure and standardization
National and local information systems
Report writing
Core/minimum data sets
Ethical issues, confidentiality and security of data/records
Competencies or Learning outcomes

On completion of this module, the student will be able to demonstrate the ability effectively to:

- analyse different sources of information and apply as appropriate to operating theatre/clinical practice;
- seek out and interpret relevant statistical data and research of relevance to anaesthetic nursing;
- set measurable outcomes for nursing practice;
- appraise and appropriately utilize developments in information technology;
- maintain accurate, clear and timely records;
- maintain confidentiality of data;
- utilize knowledge and information gained through the practice of nursing in an ethical manner;
- promote evidence-based practice.

Reading List

WHO publications
National and international literature covering the syllabus
Where accessible – On-line and distance learning materials

Teaching/learning Strategies

Lectures  Discussions
Group work  Case study presentations
Student-led seminars  Mentor support

Assessment methods

Date on which assignment is due: .............................................

Format of assignment:
Essay – either a critical review of a research study relevant to anaesthetic nursing or an analytical comparative review of the roles and responsibilities of a nurse anaesthetist and an anaesthetic nurse (100% of whole)

Mark awarded........................%
WHO Regional Office for Europe
Anaesthetic Nursing Curriculum

MODULE THREE

Title: Anaesthetic Nursing I
Duration: 16 weeks – 480 hours
ECTS Credit Points: 24

Module Content Summary

This module aims to provide the student with the opportunity to gain knowledge and understanding of the theory of anaesthetic nursing in relation to the basic principles of general anaesthesia and airway management and to apply that knowledge and understanding in practice within the operating theatres and in the clinical settings where patients are prepared for surgery and/or are recovering from surgery. The student will also gain opportunities to integrate psychology, pathophysiology, pharmacology and monitoring with holistic anaesthetic nursing care.

50% of this module will be based in the university or equivalent institute setting. 50% will be practice-based, i.e. will take place within operating theatres and in clinical settings where patients are prepared for surgery and/or are recovering from surgery.

Syllabus

Theory and application in practice of the under noted subjects:
Revision of anatomy and physiology of all relevant body systems
Pharmacology
Assessment for anaesthesia
Types and modes of delivery of general anaesthesia
Physiological changes in the anaesthetized patient – actual and potential problems
Care of the patient being prepared for surgery, while anaesthetized and when recovering from surgery
Assessment, planning, intervention and evaluation of care
Holistic nursing care
Therapeutic communication
Role of the anaesthetic nurse within the multidisciplinary team
Infection and other safety hazards control in the operating theatre/peri-operative environment
Procedures to promote patient and staff safety
Ethical and legal issues, including informed consent and confidentiality
Invasive and non-invasive monitoring techniques and interpretation of results
Airway management
Introduction to ventilation
Cardiopulmonary resuscitation
Emergency drugs – protocols for use
Defibrillation
Fluid replacement therapy
Homeostasis – mechanisms for maintenance
Patients presenting with multiple pathology
Stress management

Competencies or Learning Outcomes

On completion of this module, the student will be able to:

- demonstrate application of knowledge and understanding of the potential implications of surgery and anaesthesia for individual patients;
- demonstrate application of knowledge and understanding of physiological responses to anaesthetic and peri-operative procedures;
- demonstrate safe and skilled support for the anaesthetist to ensure management of/minimizing risk to the patient’s airway;
- conduct an analysis of the peri-operative environment to identify and assess risks of infection and other safety hazards and promote optimum safety for patients and staff;
- implement policies for infection control and the promotion of hygiene;
- ensure ethical guidelines are adhered to, for example in relation to patient confidentiality and informed consent;
- where required, take responsibility for verifying patient identity prior to surgery being carried out;
- evaluate the impact of legal and ethical issues in the management of nursing care of the anaesthetized patient;
- recognize, monitor and assist in an anaesthetic emergency in the operating theatre, or in any other location where anaesthetic emergencies may occur;
- demonstrate knowledge of location and contents of emergency trolley and the variety of emergency procedures;
- assess, plan, implement and evaluate individualized and holistic care of patients, during preparation for surgery, induction of anaesthetic, while anaesthetized and while recovering from the anaesthetic;
- ensure safe transfer to the ward with all relevant documentation;
- assess and care appropriately for the needs of patient and family regarding stress and coping mechanisms when facing and/or recovering from surgery;
- enhance the emotional wellbeing of patients and families coping with surgery, utilizing skills of therapeutic communication;
follow legal guidelines for administration of medicines when working with drugs and anaesthetic agents during induction, maintenance, reversal and post-operative phases of patient care;

practise at all times in accordance with the law governing nursing and, where existing, the Code of Professional Conduct; and

accurately and in a timely fashion complete relevant operating theatre documentation and all nursing documentation.

Reading List

WHO publications
National and international literature covering the syllabus
Where accessible – On-line and distance learning materials

Teaching/learning Strategies

Lectures    Case studies
Tutorials    Clinical simulations
Discussion   Problem-based learning
Reflective exercises   Critical incident analysis
Observation and supervised practice   Mentor support

Assessment Methods

Dates on which assignments are due: ...........................................

Format of assignments:
Examination – multiple choice and short answer questions – 30% of whole
Completion of a learning portfolio – demonstrating knowledge and understanding in relation to application to practice of the learning outcomes of the module – 30% of whole
Competency Assessment – demonstrating achievement in practice of the competencies/learning outcomes of the module – 40% of whole.

Examination: Mark awarded ......................%
Portfolio: Mark awarded .......................%
Competency Assessment: Mark awarded ...................

Aggregate mark for module (out of 100%) .........................%
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Anaesthetic Nursing Curriculum

MODULE FOUR

Title: Decision-making
Duration: 2 weeks – 60 hours
ECTS Credit Points: 3

Module Content Summary

This module will enable students to extend their knowledge of decision-making processes, typology and skills in preparation for their future role as anaesthetic nurses.

50% of this module will be based in the university or equivalent institute setting.
50% of this module will be practice-based.

Syllabus

Decision-making – theories, processes, skills
Diagnostic reasoning, therapeutic, clinical
Concepts of accountability, responsibility and autonomy in decision-making
Critical thinking in practice
Ethical issues and involvement of the patient and carer in decision-making
Strategic decision-making
Prioritizing care
Rationing care
Legal aspects in relation to practice

Competencies or Learning outcomes

On completion of this module, the student will be able to:

- demonstrate an understanding of the complexities of clinical decision-making;
- analyse and describe examples of decision-making in relation to her/his care of patients undergoing surgery;
- describe the exercise of accountability and responsibility in relation to her/his care of patients undergoing surgery;
- differentiate between strategic and clinical/ethical decision-making in nursing;
• discuss the rationale for involving patients and carers in decision-making about their care, ways of doing so and the implications of such involvement;
• state the key principles which guide the rationing and the prioritization of care in the student’s country;
• outline the law in relation to nursing in her/his country and the implications for anaesthetic nursing.

Reading List

WHO publications
National and international literature covering the syllabus
Where accessible – On-line and distance learning materials

Teaching/learning Strategies

Lectures Discussions
Group work Case study presentations
Student-led seminars Mentor support

Assessment methods

Date on which assignment is due: ………………………………………

Format of assignment:
Examination – multiple choice and short answer questions – 100% of whole

Mark awarded……………………..%
WHO Regional Office for Europe
Anaesthetic Nursing Curriculum

MODULE FIVE

Title: Leadership and Managing Resources

Duration: 2 weeks – 60 hours

ECTS Credit Points: 3

Module Content Summary

This module will enable students to explore aspects of leadership and of management which have relevance in anaesthetic nursing practice. Key principles of effective multidisciplinary teamwork will be analysed and applied to the anaesthetic nursing setting, and students will gain an understanding of the complex nature of organizational change.

50% of this module will be based in the university or equivalent institute setting.
50% of this module will be practice-based.

Syllabus

The concept of leadership – theories, processes and skills
Management – theories and processes
Managing human resources
The patient and her/his family as a resource
Care management
Organization and management of anaesthetic nursing services
Delegation of duties and responsibilities
Budgetary control
Time management
Management of change
Working as a multidisciplinary team member
Standard setting and quality assurance systems
**Competencies or Learning outcomes**

On completion of this module, the student will be able to:

- demonstrate understanding of leadership principles and processes and their application in anaesthetic nursing practice;
- demonstrate an understanding of management principles and processes and their application in the organization and management of anaesthetic nursing services;
- analyse the relative merits of different methods of work load measurement, in relation to the operating theatre and clinical practice settings;
- utilize staffing protocols in scheduling adequate staffing cover, reporting when safe levels cannot be achieved;
- demonstrate knowledge of different methods of care management and of effective delegation;
- appropriately manage her/his time both when on duty in the practice setting and when studying;
- play a full part in maintaining standards and in contributing to quality assurance monitoring;
- demonstrate in practice the team member role of the anaesthetic nurse.

**Reading List**

WHO publications
National and international literature covering the syllabus
Where accessible – On-line and distance learning materials

**Teaching/learning Strategies**

<table>
<thead>
<tr>
<th>Lectures</th>
<th>Discussions</th>
</tr>
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<tr>
<td>Practice in scheduling work rotas</td>
<td>Mentor support</td>
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**Assessment methods**

Date on which assignment is due: ..............................................

Format of assignment:
Essay of 1000–1500 words focusing on analysis of one concept from the syllabus and its application to practice in the anaesthetic nursing environment – 100% of whole

Mark awarded.........................%
Module Six

Title: Anaesthetic Nursing II
Duration: 16 weeks – 480 hours
ECTS Credit Points: 24

Module Content Summary

This module provides the student with opportunities to focus on care of patients undergoing specialist anaesthetic techniques and surgery, and to integrate psychology, pathophysiology, pharmacology and monitoring with holistic anaesthetic nursing care. The student will further explore the care of the patient recovering from the anaesthetic and surgery, including pain and nausea management and ventilator support. The module also enables the student to assume increased responsibility and accountability for the nursing care and management of patients requiring anaesthetic nursing. The student will be encouraged to reflect on current anaesthetic nursing practice, to further develop an analytical approach to evidence-based patient care and to assist with supervision and clinical teaching of anaesthetic nurses who are commencing on the course.

50% of this module will be based in the university or equivalent institute setting. 50% will be practice-based, i.e. will take place within operating theatres and in clinical settings where patients are prepared for surgery and/or recovering from surgery.

Syllabus

Theory and application in practice of the under noted subjects:
Local anaesthesia
  Pharmacology
  Physiology and transmission
  Effects
  Peri-operative application of local anaesthesia
  Local anaesthesia toxicity
Epidural and spinal anaesthesia
  Pharmacology
  Physiology and transmission
  Effects
Care of the patient who is awake throughout surgery
  Psychological care
  Stress responses
Pain theories
- Pain assessment
- Pain management, including patient-controlled analgesia (PCA)

Anaesthesia in specialist surgery and specialist postoperative care:
- Cardiac, thoracic, neurological, ENT (ear, nose and throat), Ophthalmic, Vascular, Paediatric, Obstetric
- Obstetric emergencies
- Care of the ventilated patient
- Sensory deprivation – implications for recovery
- Monitoring of the patient in recovery
- Procedures for transfer of patients from the recovery unit to the ward
- Safety and infection control
- Evidence-based anaesthetic nursing
- Nursing models or frameworks for care – relevance in anaesthetic nursing
- Professional judgement and problem solving skills
- The expanding role of the anaesthetic nurse within the multidisciplinary team
- Issues in contemporary anaesthetic nursing
- The clinical supervision and mentoring role
- Management of change
- Continuing professional development

On completion of this module, the student will be able to:

- demonstrate application of knowledge and understanding of the potential implications of specialist surgery and of specialist anaesthetic techniques for individual patients;
- demonstrate effective physical and psychological support to individual patients undergoing regional anaesthesia, i.e. the patient is awake;
- demonstrate safe and skilled support for the anaesthetist during regional anaesthesia;
- integrate knowledge of safety hazards, infection control, pharmacology and surgery to contribute effectively to a patient’s safety during induction, maintenance and reversal of anaesthesia;
- monitor patient recovery to ensure early detection and treatment of any complication and/or deterioration in their condition and initiate treatment/referral to relevant member of the clinical team;
- utilize evidence-based pain assessment tools to ensure effective pain monitoring and control;
- educate and support those patients who are using patient-controlled analgesia, to ensure effective pain control;
- assess fitness for discharge from the recovery room back to the ward;
- accurately and in a timely fashion complete nursing documentation;
- accept accountability and responsibility for her/his own professional judgment and actions;
• demonstrate management and leadership skills in practice, including the ability effectively to contribute to the management of change;
• reflect upon and critically evaluate her/his own practice;
• undertake supervision and mentoring of a junior colleague, applying principles of adult learning theories;
• give evidence of a commitment to her/his own learning and continuing professional development.

Reading List

WHO publications
National and international literature covering the syllabus
Where accessible – On-line or distance learning materials

Teaching/Learning Strategies

Lectures  Case studies
Tutorials  Discussion
Simulation exercises  Video-conferencing
Observation and supervised practice  Mentor support

Assessment Methods

Dates on which assignments are due: ……………………………………….

Format of assignments:
Examination – multiple choice and short answer questions – 30% of whole
Patient Care Study – a holistic account of the integration of theory and practice in the care of patient for whose care the student has been mainly responsible – from preparation for surgery until recovery – 2000 to 2500 words – 30% of whole
Competency Assessment – demonstrating achievement in practice of the competencies of an anaesthetic nurse – 40% of whole.

Examination: Mark awarded ……………..%
Patient Care Study: Mark awarded …………….%
Competency Assessment: Mark awarded……………..%

Aggregate mark for module (out of 100%) …………………….%
References


World Health Organization (2001b). *Nurses and Midwives for Health: WHO European Strategy for Nursing and Midwifery Education Guidelines for Member States on the implementation of the strategy*. World Health Organization, Copenhagen.


**Bibliography**


Glossary

For more detail on all those terms, please refer to the Guidelines to the WHO European Strategy for Initial Education for Nurses and Midwives (WHO 2001b)

**Academic level**

The level of difficulty of a subject. For example level one is commonly used to describe the first year studies in a baccalaureate degree, with levels two, three and four describing second, third and Honours year respectively. Masters level describes postgraduate studies at Masters degree. Doctoral level describes study at Doctor of Philosophy/Doctor of Science level. In general, the higher the level of difficulty, the more requirement there is for demonstration of analytical, critical, evaluative and innovative thinking.

**Accreditation (of an institution, programme or curriculum)**

A process, based on a system of external peer review, and using written standards, by which the quality of a university’s activities and its educational programmes are assessed and, if satisfactory, approved.

**Authority**

The rightful power to take action. This subsumes the right to make decisions on what action is appropriate.

**Clinical Supervision**

A clinically focused professional relationship between a practitioner and appropriately prepared clinical supervisor.

**Competencies**

Broad composite statements, derived from nursing and midwifery practice, which describe a framework of skills reflecting knowledge, attitudes and psychomotor elements. The term “Learning Outcomes” is often used synonymously with “Competencies”.

**Competent**

A level of performance demonstrating the effective application of knowledge, skill and judgment.

**Continuing education**

Education that builds on initial professional or vocational education.

**Credit points**

See Accreditation of prior learning.

**E-learning**

E-learning means electronic learning, (just as e-mail means electronic mail). E-learning is a form of distance learning. Course materials are on-line, students communicate with their lecturers via e-mail, lecturers give feedback via e-mail, assignments are sent in via e-mail and comments
returned to students via e-mail. Systems may be set up to enable several students and their lecturers to communicate via “chat rooms”, i.e. where questions and discussions can take place through e-mailing.

**Fitness for purpose**

Employers are primarily concerned about whether nurses and midwives are able to function competently in clinical practice. The speed of change in the context and content of health care makes it difficult to define fitness for purpose. Its meaning cannot be fixed. Fitness for purpose depends on the commitment of employers and of practising nurses and midwives to constant professional updating (Adapted from UKCC 1999).

**Health care reform**

Any intended change towards improvement of health care of the acutely and chronically ill, rehabilitation, case-finding, health promotion and maintenance, prevention of disease and disability and health education.

**Learning Outcomes**

See Competencies

**Licence**

See Registration

**Mentor**

An appropriately qualified and experienced person who, through example and facilitation, guides, assists and supports individuals in learning and in acquiring new attitudes. The term is particularly used in relation to supporting learning in practice settings.

**Multiprofessional team/ Multidisciplinary team**

A team of health care professionals from different disciplines, e.g. nurses, midwives, physicians, physiotherapists, who work together towards a common goal which enables them to make the best use of their knowledge, skills and experience in providing patient care.

**Network**

A grouping of individuals, organizations and/or agencies organized generally on a non-hierarchical basis around some common theme or concern.

**On-line learning**

See E-learning

**Patient**

The real person who is the end-user in all our health systems. S/he is the human being who is meant to benefit from our efforts, but who, if reduced to a mere statistic, demonstrates that the heart has gone out of the profession. User(s) of health care services, whether healthy or sick.
**Peer review**

Scrubtny of the work, activities or output of individuals or a group by other individuals or groups who have qualifications and experience that are directly comparable to those of the people being scrutinized.

**Practice placement**

The clinical area to which nurses and/or midwives are allocated in order to undertake the practice components of their education. These clinical areas may be in hospital or community settings.

**Programme**

This term is synonymous with course, i.e. a course of study, and denotes the entire course, in all its elements. It may be a full-time or part-time programme or course, e.g. a degree, or a short course.

**Promote health**

The process of enabling individuals, families and communities to increase control over the determinants of health and thereby improve their health. An evolving concept that encompasses fostering lifestyles and other social, economic, environmental and personal factors conducive to health.

**Prospective Analysis Questionnaire**

A questionnaire, based on the Prospective Analysis Methodology (PAM), which is a process that facilitates decision-making, interchange of ideas and opinions, and recognition and development of a need to change.

**Resources**

Human resources, money, materials, skills, knowledge, techniques and time needed or available for the performance or support of action directed towards specified objectives.

**Registration**

A method of ensuring a record is maintained of those who are *bona fide* nurses and/or midwives, i.e. they have successfully completed the initial nursing and/or midwifery education programme which is required in their country. In several Member States it is necessary to regularly renew this registration. In order to do so, nurses and midwives must provide evidence of successful completion of continuing education relevant to their area of practice.

**Specialist Nurse**

A nurse who has successfully completed a post qualification course of study in a specific clinical field and who applies higher levels of judgement, discretion and decision-making in clinical care in order to improve the quality of patient care, meeting the needs of patients within the specialty and in the specific area of practice.

**Standard**

Statement of a defined level of quality or competence which is expected in a given set of circumstances. In nursing and midwifery, the statements identify and define the criteria which influence the quality or competence of the nursing/midwifery service, and clarify what is
expected in relation to the structures, processes and outcomes. A means of measuring the degree of excellence of an educational programme and of comparing the degree of excellence of one programme with that of others.

**Strategies**

Broad lines of action to be taken to achieve goals and objectives incorporating the identification of suitable points of intervention, the ways of ensuring the involvement of other sectors and the range of political, social, economic, managerial and technical factors, as well as constraints and ways of dealing with them.

**Video-conference**

The use of video to bring groups together for discussions and a sharing of views. Groups in geographically separate areas can be connected via video link and can see and hear each other.
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This curriculum is a component part of the European Continuing Education Strategy developed by the WHO Nursing and Midwifery Programme, Regional Office for Europe. Please contact the Regional Adviser, Nursing and Midwifery for further details.