

Nursing education and regulation: international profiles and perspectives

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This review of nurse education and regulation in selected OECD countries forms part of ongoing work on contemporary nursing careers and working lives, based at the National Nursing Research Unit, King's College London. The review was commissioned by the Department of Health to inform their work in considering the UK's position in relation to the Bologna declaration and changes that may emanate from the implementation of *Modernising Nursing Careers* (DH 2006). While much of the information in the review was obtained from publications and websites, we also contacted key personnel in most of the countries included for an up-to-date review of developments in their country and would like to thank them all for providing this information. Our thanks to Gian Brown, Unit Manager, for report production.

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Introduction

This review provides comparative information about nursing education and regulation in selected OECD countries. Commissioned by the Department of Health, the purpose of the review is to inform considerations about the UK's position in relation to the Bologna declaration on higher education in Europe (European Ministers of Education 1999) and changes that may emanate from the implementation of *Modernising Nursing Careers* (DH 2006).

'*Modernising Nursing Careers*' contains several action points concerned with nursing education; in particular to:

'Assess whether changes are needed to the content and level of the pre-registration programme to develop a competent and flexible workforce.'

'Review the career pathways and educational preparation required for specialist and advanced roles.'

'Recruit the best and most suitable people into nursing.'

Like the UK, many developed countries are in the throes of debate and change to their systems of nurse education and are also challenged by problems of recruitment and retention of their nursing workforce. In most European countries, including the UK, nursing is based wholly or partly in the higher education sector and is therefore affected by the recommendations of the Bologna declaration to harmonize higher education across the region. Consequently, decisions about changing aspects of pre-and post-registration nurse education are likely to be directed towards achieving comparability of credits and competencies at first degree, masters and doctoral level within Europe (Zabalegui *et al* 2006).

Developing a comparative profile of the nature of nursing education and proposed developments in other European countries thus provides part of the context for considering possible changes in the UK. At the same time, however, the UK nursing profession has many similarities and close links with nursing in countries outside the EU and changes also need to be considered in the light of developments and experiences in these countries.

The next section provides information about the topics covered in the review and the sources upon which we drew. In subsequent sections we draw together some of the main themes and policy implications that emerge when the UK position is compared with that of the EU and non-EU countries included in the review. A detailed profile of each country then follows in alphabetical order.

Topics and sources

The review for each country follows the same format: health spend; nursing staff; pre-registration education; post-registration education; and regulation. Here we outline the content of each section and the sources upon which we drew.

Section 1: Health spend

In order to provide a context for the nursing data, brief information is presented about health spend: population; health spend per capita (US dollars); health spend as a percentage of GDP; and source of the health spend.

Section 2: Nursing staff

This section provides data on the number of nursing staff and the number of practising staff per 1000 head of population.

Sources for sections 1 and 2:

We have used OECD 2006 data for sections 1 and 2 in order to provide comparability across countries; Labour Force Statistics for population and Health statistics for the other sections. The

number of nurses has been calculated using the population figures and the numbers of nurses per 1000 head of population. We have found that other sources of data do not always correspond with OECD figures, and this may be due to definition and differences in methods of classification. We have presented the OECD data for consistency.

Section 3: Pre-registration nursing education

This section starts with the levels of pre-registration nurse education in the country and then provides the following information for each: the provider; entry qualifications; length of training; exit qualification; and whether the course provides a generalist nurse training which can be followed by subsequent specialization or a course that provides opportunity to gain a specialist qualification. Information is provided about each route to registration where more than one exists. Current developments and proposed changes are also outlined.

Attention is drawn to:

- opportunities to upgrade from a second level to a first level nurse and for first level nurses to upgrade to a higher level of qualification (e.g. from diploma to degree).
- diversity over whether initial registration leads to a specialist or generalist qualification.

Section 4: Post-registration education and career paths

This section focuses primarily on post registration educational opportunities and includes:

- specialist training education leading to registerable qualifications
- advanced nursing practice including information about nurse practitioners and clinical nurse specialists if applicable
- the existence of masters and doctoral programmes
- courses leading to careers in education and management.

Section 5: Regulation

Information is provided about regulation of first level and, if applicable, second level nurses. If available, information is provided about the regulation of advanced practice.

Sources for Sections 3,4 and 5

Information was obtained from: published literature; country specific websites for nursing organizations; and generic websites including those for the Workgroup of European Nurse Researchers (WENR), the International Council of Nurses (ICN), the European Federation of Nurse Regulators (FEPI) and the European Commission. When information was missing or possibly out of date, we sent a copy of a first draft of the country profile to senior personnel in the nursing profession for comment, amendments and additions.

Key cross-national themes

The approach to comparison has been to consider the UK's position in relation to other countries: those in the EU (Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Netherlands, Norway, Spain, Sweden and Switzerland) and those outside the EU (Australia, Canada, Japan, New Zealand and the United States). The key themes in the development of UK nurse education which have been used as the framework for the review are:

- The cessation of second level training.
- The transition to higher education and the replacement of the certificate course with the diploma and/or degree.
- The change from direct entry courses leading to specialist qualification to a common foundation programme followed by branch programmes leading to specialist qualification.
- The development of degree level courses; first as four-year courses in some universities and increasingly as a three-year course in most universities.
- Discussions about moving to an all-degree profession at the point of registration.
- The development of advanced and specialist roles
- Regulation of pre-registration and post-registration education.

Table 1 provides a summary of the key features of first level education and the title and length of second level education in the countries reviewed.

Table 1: Pre-registration nurse education – country summary

	Level	First level nurse: registered					Second level nurse	
		Sector	Length years	Qual	General/specialist	Title	Length years	
 Belgium	2	HE SN in UC sector	3	degree	general	diplomate	3	
 Denmark	1	HE SN in UC sector	3.5	degree	general			
 Finland	2	HE Polytechnics	3.5	degree	general	practical	3	
 France	1	FE SN	3	diploma	general			
 Germany	2	FE SN	3	diploma	DE	nurse assistant	1	
 Ireland	1	HE University	4	degree	DE			
 Italy	1	HE University	3	degree	general (some DE)			
 Netherlands	2	FE SN	4	degree	general	M-BOV	4	
 Norway	1	HE University/UC	3	degree	general			
 Spain	1	HE University	3	degree	general			
 Sweden	2	HE University	3	diploma	general	licensed	3	
 Switzerland	1	Voc HE SN University	3 3	diploma degree	general			
 UK	1	HE University	3	dip/& degree	branch			
 Australia	2	HE University	3	degree	general	enrolled		
 Canada	2	HE University CC	4 3	degree diploma	general (some DE to PN)	licensed practical	1-2.5	
 Japan	2	HE University NgColl SN	4 3 3	degree ass deg diploma	general	licensed practical	2	
 New Zealand	2	HE University	3	degree	general	nurse assistant		
 United States	2	HE University CC SN	4 2 3	degree ass deg diploma	general	licensed practical	1	

Key

CC – community college

DE – direct entry

HE – higher education

FE – further education

NgColl – nursing college

PN – psychiatric nursing

SN – school of nursing

UC – university college

Voc - vocational

Levels, providers and length of nurse education

Ten of the 18 countries maintain two levels of nurse, this includes all the non-EU countries) and 5 of the 12 EU countries (Belgium, Finland, Germany, Holland and Sweden). In this respect the UK is in line with the majority of its European counterparts but differs from all the non-EU countries

Like the UK, most countries have moved the education of first level nurses to the higher education sector and offer a diploma and/or a degree. Although France and Germany have long been the exceptions, with most nurses qualifying via schools of nursing attached to hospitals, several German universities are now offering a first level professional and academic qualification and the nursing profession in France is campaigning for nursing to move to the higher education sector.

Of those that have moved to higher education, 6 countries, including the UK, offer more than one route to registration; typically a diploma, an associate degree and a degree. While England (alone of the 4 UK countries) offers the diploma and the degree at university level, other non-EU countries tend to offer the 3-year degree and the diploma at other institutions such as community colleges.

Most of the countries offering one route to registration provide a 3-year course, some a 3.5 year course, with only Ireland providing only a 4-year course. The pattern among countries offering more than one route is for the degree course to be four years and associate degrees and diplomas to be shorter. Most countries offering more than one route to registration provide opportunities to upgrade to degree level.

Details of the second level courses vary considerably, ranging in length from 1 to 3 years and offered at a diversity of institutions. Full details are provided in the country profiles; this information was often less accessible than that about first level courses. Several countries, such as Canada and Australia provide second level nurses with the opportunity to upgrade to a first level qualification.

Generalist or specialist education

Diversity exists over the point at which specialist qualifications are gained. Information about first level pre-registration education in the countries reviewed showed that four models exist, forming a continuum from an entirely specialist course to an entirely generic course with two variants in between.

Specialist qualification at first level after a direct entry course (Model 1)

The German system is direct entry to general nursing, paediatric or geriatric nursing. Ireland, with a 4-year degree course, offers 5 direct entry routes to general, children and general integrated, intellectual disability, psychiatric nursing and midwifery. Some Canadian provinces offer direct entry to psychiatric nursing and in Italy, there has been a contested move to introduce direct entry to paediatric nursing.

Specialist qualification at first level after a core plus branch course (Model 2)

The UK system of a core programme followed by a branch in which a specialist qualification is gained (Adult, child, mental health or learning disability) appears to be unique.

Generalist qualification following a generic course with specialist options (Model 3) and without specialist options (Model 4)

The majority (14) of countries provide a generic nurse training with no specialist qualification at pre-registration level. Specialist qualifications are obtained at post-registration level. In many countries, the move from specialist, direct entry courses to a generic education accompanied the transition of nursing education to the higher education sector. These countries differ as to whether specialist options are offered towards the latter part of the course or all students follow the same programme throughout.

There is considerable debate in many countries about the possible advantages and disadvantages of the move from specialist to generic nurse education at initial qualification level. The situation is not static with some countries that moved to generic courses without specialist options (Model 4) have

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subsequently introduced options in certain specialties (Model 3). Debates and developments on generalist versus specialist pre-registration nurse education is the subject of a separate review by the National Nursing Research Unit (Robinson and Griffiths 2007 forthcoming for November 2007).

The situation with midwifery education varies: some countries offering direct entry midwifery, others regarding it as a post-registration speciality.

With regard to countries that offer first and second level training, it should be noted that some have a generalist approach at one level and a specialist at the other.

Post-registration education

The information about education after registration is, in some countries, not as readily accessible as that on pre-registration nursing education and our information is less robust. However, some trends can be identified.

All countries offer some form of post-registration education that includes specialty training leading to registerable qualifications and a diversity of courses in clinical practice, teaching and management.

Considerable differences emerge in relation to advanced nursing practice; some countries reporting that development is in very early stages, other countries report developments such as masters of nursing science being offered at an increasing number of universities, and finally most of the non EU countries offer a wide range of advanced practice courses, most typically Nurse Practitioner and Clinical Nurse Specialist courses. Information for the US and Canada indicates that these qualifications are only offered at masters and/or doctoral level. Advanced nursing practice in the countries reviewed provides a complex and changing picture.

Regulation

Regulation practices vary by country; some are nationally based, others based on regions within the country. Responsible authorities vary from government ministries, typically those concerned with Health and/or Education, to national nursing organizations and independent statutory bodies.

Regulation of advanced nursing practice varies by country. In Canada and the US, it appears that Nurse practitioner is a registered qualification. Like the UK, most countries with a programme of advanced nursing practice report that work is in progress to implement regulation.

Policy considerations

Reviews of pre-registration nurse education in the UK will need to consider:

- a) recommendations resulting from the Bologna declaration to harmonize higher education in Europe
- b) experiences of countries (EU and non-EU) that have different nurse education systems from the UK.

This review of selected OECD countries suggests that key issues for consideration include the following:

1. What are the benefits and problems of the UK's unique system of specialist preparation (a 3 year core plus branch course)? Careful consideration of this with other approaches is required: direct entry; specialist options within a generic course; and specialization only available after a generic first level training.
2. Does having more than one entry level encourage recruitment of a wider diversity of people into the profession than a single level entry and is recruitment enhanced by knowledge that opportunities and support exist for upgrading after initial qualification?

3. How should pre-registration nurse education best be developed to provide a firm foundation for a post-registration framework of careers and further education?
4. How should pre-registration nurse education best be developed to facilitate the mutual recognition of qualifications required for international mobility and at the same time be appropriate for the demands of health care delivery in the UK?

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Australia



Health Spend (Source: OECD 2006)

Population:	20.329 million (2005)
Health spend per capita (US dollars):	3120 (2004)
Health spend as % of GDP:	9.6% (2004)
Source of health spend:	67.5% public (2003)

Nursing Staff (Source: OECD 2006)

Number of nurses: 211,422
 Number of practising nurses per 1000 head of population: 10.4 in 2003

Pre-registration Education

Levels/categories

Two: registered and enrolled nurses

Registered nurse

Provider: Universities, there are 35 university based Schools of Nursing
 Entry qualification: university admission criteria
 Length of course: 3 years
 Exit qualification: degree

Once the degree course is completed, a national examination has to be passed for admission to the register (Moore 2005).

Generalist or specialist education

A general education which produces the 'beginning nurse'. Universities provide postgraduate courses to produce specialists in several areas.

Enrolled nurse (EN)

These nurses work mainly in elderly care settings.

Provider: Schools of nursing which are part of the vocational educational and technical sector (VET) and accredited at state level. In some states, the courses are based in technical and further education institutes

Length:

Exit qualification: enrolled nurse

Concerns exist about consistency of standards across courses. Many enrolled nurses subsequently take university courses to become graduate nurses. Some universities are considering offering an associate diploma at EN level.

Post-Registration Education and Career Paths

Specialist education

Wide range of continuing education courses available.
 Specialist courses provided by universities at postgraduate level.

Advanced nursing practice

Nurse practitioner courses are available at masters degree level. Nurse practitioners are defined as 'a registered nurse educated and authorised to function autonomously and collaboratively in an advanced and extended clinical role'.

Masters, doctoral programmes

Masters level courses are required for leadership roles in practice and education and for extended clinical roles such as nurse practitioner.

Traditional PhD courses are required for academic careers. There is a growing emphasis on the professional doctorate courses with an applied orientation.

Education, management, research

Careers in all these areas are available and require qualifications as detailed in 4.3 above.

Regulation**Regulation of first and second level nurses**

By July 2008, a single national registration scheme will be introduced for all health professions and a new national professions board for each of the 9 professions (ANMC 2007).

Regulation is currently undertaken by the Nursing and Midwifery Regulatory Authority (NMRA) in each of the six states and two territories; nurses are required to register with the NMRA for the state in which they intend to practise. Annual re-licensing is the norm (Moore 2005). The Australian Nursing and Midwifery Council was established in 1992 to facilitate a national approach to nursing and midwifery regulation.

Regulation of advanced practice

Nurse practitioners are licensed to practice by the NMRAs. The title is protected (ANMC 2007)

Sources

Australian Nursing and Midwifery Council (2007) (<http://www.anmc.org.au>), accessed 8/06/07.

International Council of Nurses (2006) Advanced practice network (<http://www.icn-apnetwork.org>), accessed 8/06/07

Moore D (2005) *Assuring fitness for practice: a policy review commissioned by the Nursing and Midwifery Council nursing task and finish group*. Nursing and Midwifery Council, London

Belgium



Health Spend (source: OECD 2006)

Population:	10.438 million (2005)
Health spend per capita (US dollars):	3044 (2003)
Health spend as % of GDP:	10.1% (2003)
Source of health spend:	

Nursing Staff (Source: OECD 2006)

Number of nurses: 62,628
 Number of practising nurses per 1000 head of population: 6 in 2004

Pre-registration Education

Registration and titles are federal responsibilities in Belgium. Nurse training is the responsibility of the education departments of the Flemish, French and German communities and some details differ.

Levels/categories

Two levels of nurse: bachelor nurse (first level) and diploma nurse (second level)

Bachelor nurse

Provider: Nursing schools at university college level (higher education outside university).
 Entry qualification: similar to university
 Length: 3 years
 Exit qualification: diploma and degree

Generalist or specialist education:

Regarded as general nurses, programme contains specialist options in paediatrics, psychiatry, community health, hospital or geriatric nursing (from 0 to maximum of 60 ETCS).

Diploma nurse

A vocational programme based on an apprenticeship model.
 Provider: secondary school at 4th, 5th and 6th year.
 Entry qualification: Secondary school vocational training programme
 Length: 3 years
 Exit qualification: diploma (Flemish), certificate (French, German)

Generalist or specialist education:

Students follow a common first year and then chose general or psychiatric nursing (latter regarded as direct branch entry).

Post-Registration Education and Career Paths

Specialist education

Offered as a second bachelor degree in a range of areas (60 ETCS), or within continuing education programmes. Following areas are covered: intensive care, emergency care, geriatrics, paediatrics, mental health, community nursing, oncology, palliative care, operating theatre.

Advanced nursing practice

Advanced nursing practice is linked to the Master in Nursing Science (not formally).

Masters/doctoral programmes

Masters in Nursing Science offered at 4 universities in Flanders and 3 universities in the French region.

Education/management/research

Bachelor nurses can undertake further training in:
Healthcare management (second bachelor or masters degree)
Infection control (second bachelor or masters degree)
Quality management (continuing education).

Regulation**Regulation of first and second level nurses**

Nurses register with one of the 10 provincial authorities which entitles them to practise in the province. Registration has to be renewed every 3 years.

Regulation of specialised/advanced practice

Nurse specialist titles are defined in Belgium Federal Law, and have to be renewed every 6 years. Two titles are in use: intensive and emergency nursing, geriatric nursing.

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Moreno-Casbas T (2005) Nursing Research in Europe. Scoping Report. Institute of Health, Carlos III, Madrid

Personal communication (2007) Senior personnel in the Belgian nursing profession

Canada



Health Spend (Source: OECD 2006)

Population:	32.271 million (2005)
Health spend per capita (US dollars):	3165 (2004)
Health spend as % of GDP:	9.9% (2004)
Source of health spend:	70% funded by government (2004)

Nursing Staff (Source: OECD 2006)

Number of nurses: 319, 483 (Source: OECD 2006)
 Number of practising nurses per head of population: 9.9 in 2004

Pre-registration education

Levels/categories

Two: registered nurse and licensed practical nurse.

Registered nurse

Registered nurse qualification is offered at degree and diploma level.

Most provinces have moved to all degree and require this for entry into the profession. The Canadian Nursing Association (CNA) recommends that applicants choose the degree route as this offers better career opportunities and access to postgraduate qualifications.

Provider: degree courses are based in universities and diploma programmes in community colleges.

Entry qualifications: differ from one school to another but generally require high school graduation with senior level English or French, maths, chemistry, physics and biology.

Length: degree courses are 4 years and diploma courses 3. Diplomates can take a 1 year university course to upgrade to degree.

Exit qualification. Baccalaureate in nursing (BN or BScN) or a diploma.

Generalist or specialist education:

General training with specialization after registration. The exception is three courses that offer direct entry psychiatric nurse training; two at diploma level and one at degree, with one of the former planning to convert to degree.

In all provinces and territories, except Quebec, graduates from general and psychiatric degree and diploma programmes have to pass a national licensing examination (the Canadian registered nurse exam.) to be able to register.

Licensed practical nurse (LPN)

Provider: post secondary education institutions (community colleges).

Length: varies from 1 year to 2.5.

Exit qualification: some differences between provinces e.g. some qualify with a diploma.

Generalist or specialist education:

Generic training with specialisation after licensing.

Psychiatric nurse training is a separate course.

There is discussion as to whether the LPN should become a diploma programme and fill the gap left by the demise of the diploma prepared registered nurse.

Post–Registration Education and Career Paths

Specialist education

CNA certification is available in 17 clinical specialties. Eligibility for CNA certification is based either on experience in the speciality or on a combination of experience and post-basic education. This programme does not differentiate advanced practice from competence and experience in the specialty and there is confusion over titles (nurse associates, extended role nurses).

Advanced nursing practice

Advanced nursing practice has developed in 3 categories

- i) Some CNA certificates (see specialty training above)
- ii) Nurse practitioner posts
- iii) Clinical nurse specialist posts.

ii) Nurse practitioner (NP)

Defined as a registered nurse with additional education in health assessment, diagnosis and management of illness and injuries including prescribing drugs. Eleven Canadian provinces and territories have NP legislation and regulations in place or in progress. Some provinces require a masters or doctoral degree in nursing to be licensed as a nurse practitioner.

iii) Clinical nurse specialist (CNS)

Registered nurse who holds a masters or doctoral degree in nursing with expertise in a clinical nursing specialty. This role has the most consistency across the country.

Masters, doctoral programmes

Many universities offer Masters (21) and doctoral (4) programmes.

Education, management, research

Careers available in diverse areas of clinical practice in hospital and community settings, in education, research and nurse administration (management).

Regulation

Regulation of first level nurses

Legislation regulating the nursing profession is provincial rather than federal. Each of the 10 provinces and 2 territories has its own regulator established in provincial law. Most have an education approval function (with university sector approval mechanisms in some provinces) as well as a professional conduct function. In many states, psychiatric nurses and licensed practical nurses have separate regulatory bodies fulfilling similar functions.

An umbrella Health Professions Act has been enacted in most provinces and territories to provide a common framework for all self-regulating health professions.

Regulation of advanced practice

Nurse practitioners: State/territory variation over whether licensed separately from other registered nurses.

Sources

Canadian Nurses Association (2007) (<http://www.cna-nurses.ca>)

Moore D (2005) *Assuring fitness for practice: a policy review commissioned by the Nursing and Midwifery Council nursing task and finish group*. NMC, London. pp. 55-65

Pringle D et al (2004) *Nursing education in Canada: historical review and current capacity*. The Nursing Sector Study Corporation, Ottawa, Ontario

Denmark



Health Spend (Source: OECD 2006)

Population:	5.416 million (2005)
Health spend per capita (US dollars):	2881 (2004)
Health spend as % of GDP:	8.9% (2004)
Source of health spend:	83% publicly funded (2004)

Nursing Staff (Source: OECD 2006)

Number of nurses: 37,912
 Number of practising nurses per 1000 head of population: 7 in 2003
 Number of midwives: 1312
 Employing organization: Most nurses (93%) employed by government through the local regions that provide hospital and community services

Pre-registration Education

Levels/categories

One: Bachelor degree in nursing

Bachelor degree in nursing (BN)

Provider: higher education institutions are grouped into the: college sector which provides professionally oriented higher education; and the university sector. Nursing education is based in the former and is undertaken in schools or departments of nursing which are part of centres of higher education (CVUs). From 2005 onwards, CVUs fulfilling certain quality criteria can be awarded the label of university college.

Entry qualification: equivalent to university (12-13 years upper secondary education).

Length: 3.5 years (2 yrs in college followed by 18 months in clinical field and completion of a project).

Exit qualification: Professional Bachelor's degree in Nursing. The level corresponds to that of University Bachelor's programmes.

General or specialist education:

General education. The 18 months clinical component includes the following areas of nursing: medical, surgical, obstetric, paediatric, geriatric, psychiatric and home nursing.

Developments: In February 2008, a new national curriculum will be introduced leading to a Bachelor Degree in Nursing Science.

Post-Registration Education and Career Paths

Specialist education

After general nurse education, specialist courses are available at diploma or masters level in the college sector that lead to qualification in the following:

Anaesthetic nurse (18 mths),

Intensive care nurse (18 months),

Entry requirements for both these courses include 2 years general nursing plus 6 months in the specialty area.

Psychiatric nurse (1 year), entry requirements include 2 years psychiatric nursing experience.

Hygienic nurse (Infection control) (3 month course), entry requirements are 3 years nursing with teaching and administrative experience and preferably holding an Advanced Nursing Education diploma).

A diploma in education for qualification as a Home visiting nurse is available as a 1 year course at the University of Aarhus. Entry requirements are 1 year nursing experience that includes paediatric and home nursing.

Continuing education: Branch Boards of the Danish Nursing Organisation offer study days, seminars and theme days on topical issues, specifically aimed at meeting the local needs of nurses.

Advanced nursing practice

See masters programmes below.

Masters, doctoral programmes

Masters degrees in clinical nursing are available at some University Colleges.

Several universities offer a Master of Nursing Science; this is equivalent to a masters degree at university level (referred to as candidatus programmes). At the University of Aarhus Institute for Nursing Science this is a full-time course, other universities offer it on a part time basis.

A PhD in nursing is available at some universities.

Education, management, research

Education and teaching in nursing (1 year course, entry requirement is 1 year experience). Exit qualification: diploma

Management/leadership in nursing (1 year course, entry requirement is 1 year experience. Exit qualification: diploma

Both courses are available at the University Colleges of Denmark.

Regulation

Regulation of first level nurses

The Bachelor degree in Nursing is regulated by the Ministry of Education. Registration is the responsibility of the National Board for Health which authorises the right to practise and holds registers for 17 professional groups including nurses and midwives. The Board follows up and evaluates reforms, legislation and activities conducted by municipalities, county councils and other organizations.

Regulation of advanced practice

No legally protected specialist nurse titles except that of home visiting nurse.

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Finland



Health Spend (Source: OECD 2006)

Population:	5.246 million (2005)
Health spend per capita (US dollars):	2235 (2004)
Health spend as % of GDP:	7.5%
Source of health spend:	publicly funded

Nursing Staff (Source: OECD 2006)

Number of nurses: 39,869
 Number of practising nurses per head of population: 7.6 in 2004

These figures differ from those provided by Statistics for Finland (2007); in 2006 there were 68,683 nurses, of whom 42,855 were practical nurses (see below).

Pre-registration Education

Levels/categories

Two: registered and practical.

Registered nurse/registered public health nurse

Receive similar training but regarded as separate professions.

Provider: The Finnish higher education system consists of two parallel sectors; polytechnics (28) and universities (20). Nurse education is based in the polytechnic sector which is working life oriented, trains professionals in response to labour market needs and operates on the basis of higher education expertise requirements set by working life (Ministry of Education 2006).

Entry qualification: certificate from an upper secondary school or the matriculation certificate, a vocational qualification or corresponding foreign studies.

Length: 3.5 years (201 ECTS) for registered nurse and 4 years (240 ECTS) for public health nurse.

Exit qualification: Bachelor in Health Care (public health nurse is qualified as a nurse and a public health nurse).

Generalist or specialist education:

General nurse education with choice of a specialized area in final 6 months of course; these include mental health, acute care, youth and adolescent, geriatric, palliative care, paediatrics, multi-cultural nursing.

Midwifery: general nurse training followed by one-year midwifery (4.5 years/270 ECTS), leading to exit qualification of both nurse and midwife.

Practical nurse

A vocational qualification in social and health care, with just over half working in social services.

Provider: vocational institutions

Length: 3 years (2 until 1995)

Exit qualification: diploma or certificate (varies by institution).

Post–Registration Education and Career Paths

Specialist education

Variety of post-registration programmes are available in specialties such as nursing older people, mental health nursing, family nursing, medical-surgical nursing and health promotion. From 2005, these have been offered at masters level in the polytechnic sector. The entrance requirement is a minimum of 3 years relevant work experience after completion of first degree. The exit qualification is Master of Health Care (90 ECTS).

Advanced nursing practice

Development of new advanced practice programmes reported in ICN advanced practice network press release for 2006. These are the Masters degrees in Health Care (above).

Masters, doctoral programmes

Four universities have Departments of Nursing and Caring Sciences and offer masters and doctoral programmes. To access these courses, Registered Nurses first have to take the Bachelor of Nursing Science degree (180 ECTS).

Education, management, research

Courses available in leadership/management. Some university departments of Nursing Science (e.g, Tampere, Turku, Kuopio) offer a master's programme with nursing science as the main subject with management and leadership as minor subjects. There is also a new Masters in Nursing programme at polytechnics which focuses on management and leadership.

Hospitals define their own minimum requirements for qualifications for head nurses and directors of nursing, usually the former requires a masters degree and the latter a licentiate or doctoral degree. Nurse lecturers are expected to have a masters degree and principal lecturers a licentiate or doctoral degree.

Regulation

Regulation of first level nurses

Ministry of Education approves degree programmes. One of the three national boards of the National Authority for Medico-Legal Affairs deals with registration/authorisation to practise for both levels of nurse and keeps a register of all health care personnel.

Regulation of advanced practice

Specialist nurses are not recognized through separate registration.

Sources

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Workgroup of European Nurse Researchers (2001) Nursing Research in Finland 2001 (<http://wemr.org/DesktopModules/Articles/ArticlesView.aspx?TabID=34ItemID=4705&mid=10542> accessed 8/06/07

France



Health Spend (Source: OECD 2006)

Population:	60.873 million (2005)
Health spend per capita (US dollars):	3159 (2004e)
Health spend as % of GDP:	10.5% (2004)
Source of health spend:	78.4% publicly funded (no date)

Nursing Staff (Source: OECD 2006)

Number of nurses: 456,548 (Source: OECD data)
 Number of practising nurses per 1000 head of population: 7.5 in 2004

Pre-registration Education

Levels/categories

One.

First level nurse

Provider: hospital-based school of nursing
 Length: 3 years
 Exit qualification: state diploma

Generalist or specialist education:
 General training followed by specialization at post registration level.

Nursing is classified as a paramedical profession and midwives are classified as a medical profession.

Developments: the nursing profession is in discussion with government about reforming nurse education and hopes to see the introduction of an academic, higher education based approach to training and greater emphasis placed on evidence-based practice.

Post-Registration Education and Career Paths

Specialist education

Three recognized specialist career pathways are available:

Child care nurses: 1 year course in schools of nursing recognized by the prefect of the administrative region concerned.

Nurse anaesthetist: 2 years of prior professional experience required prior to 24 month training in approved schools for nurse anaesthetists.

Operating room nurse (2 years professional experience required prior to 18 month training in approved schools.

Other specialist career pathways exist such as mental health nurses and clinical nurse specialists but are described as 'non-official'.

Emphasis is placed on the importance of continuing training and courses are available.

Advanced nursing practice

The nursing profession is seeking to expand advanced nursing practice and the development of new advanced programmes were reported in 2006 (ICN apnetwork).

Masters, doctoral programmes

Post-graduate level study is available in some universities but is undertaken within other disciplines as there is no specific nursing discipline in France.

Nurses can access medical and paramedical training programmes in healthcare which are aimed at professionals seeking to improve their knowledge but do not give access to specific occupations. Throughout France, universities may be authorised to grant licences (the French equivalent of the Bachelors degree) or even Masters, to students in paramedical training programmes (Campus France 2005).

Existing programmes include:

Licence in Health and Social Sciences (Universite de Paris).

University diploma in pain management (Universite de Paris)

Licence in health administration: two courses are offered at the Universite de Marne-la-Vallee; Health, occupational safety and environment and Healthcare services management.

The Ecole nationale de la sante publiques co-ordinates a 2 year European Masters in Public Health with four other European countries.

Education, management, research

Graduate education is available in nurse management and nurse education (10 month course in both cases). Further training at the National School for Public Health is required for posts of Director of nursing Healthcare setting and Director of nursing Education setting.

Regulation**Regulation of first level nurses**

State certification is approved by the Ministry of Health.

Sources

Agence EduFrance (2005) Nursing. (http://editions.campusfrance.org/filieres/en/infirmier1_en.pdf) accessed 9/06/07

Campus France (2005) Nursing - Further training programmes (http://editions.campusfrance.org/filieres/en/infirmier2_en.pdf), accessed 31/070

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Moreno-Casbas T (2005) Nursing research in Europe. Scoping report. Institute of Health, Carlos 111, Madrid

Personal communication (2007) Senior personnel in French nursing profession

Germany



Health Spend (Source: OECD 2006)

Population:	82.466 million (2005)
Health spend per capita (US dollars):	3043 (2004)
Health spend as % of GDP:	10.6% (2004)
Source of health spend:	78.2% publicly funded (2003)

Nursing Staff (Source: OECD 2004)

Number of nurses: 799, 920 (Source: OECD data)
 Number of practising nurses per head of population: 9.7

Pre-registration Nurse Education

Levels/categories

Two: first and second level. As there is no registration system in Germany, the term registered nurse is not used.

First level nurse

There are two routes to becoming a first level nurse

- i) 3 year course based in a school of nursing attached to a hospital and organized comparably to an apprenticeship. This is the route by which all but a very small proportion of nurses qualify. Described as regular nurse education and regarded as further not higher education. Entry qualifications: completion of 10 years general schooling, age 17. Exit qualification: nursing diploma.
- ii) From 2004, a Bachelor's degree in nursing has been offered by several universities and universities of applied sciences in which nurses obtain their first professional and academic education (e.g. at the Protestant University of Applied Sciences in Berlin); other universities also plan to start these courses.

Many universities offer bachelor degree programmes for nurses who already hold registration through regular nurse education and have at least one year of practice. Details are in the post-registration section below.

Generalist or specialist education:

Regular nurse education comprises 3 direct entry courses: paediatric, geriatric and general nursing.

Second level nurse

1-year course based in a school of nursing linked to a hospital.

Post-Registration Education and Career Paths

Specialist education

Post-registration education is available in: intensive care, psychiatric care, theatre nursing, oncology nursing, community nursing and infectious diseases control. Most courses are 2-year hospital based programmes.

Advanced nursing practice

More than 50 universities of applied science offer bachelor programmes (BA or BS) in nursing for nurses who already hold their registration; these courses focus mainly on management and education but also nursing science. For example, the programme at the Alice Salomon University of Applied

Sciences (AFSH) in Berlin offers a BS in nursing for registered nurses who want to specialize in Management and Quality Enhancement.

Masters, doctoral programmes

Doctoral degrees are available in nursing science at several universities: these include the 'rerum cura' at Humboldt university in Berlin, the 'rerum medicarum' at the Free University in Berlin, and a PhD and DPH (public health) at Humboldt, Bremen, Osnabrueck, Bielefeld and Halle.

Education, management, research

As indicated above, courses in nursing management and education are available as hospital-based programmes and degrees courses.

Regulation

There is no national system of registration or a regulatory nursing body, responsibility for registration is devolved to the regions.

Regulation of first level nurses

The National Nursing Act and an Ordinance of 1985 regulate general nurse education at national level and define the professional competence and responsibilities of nurses. The National Nursing Act regulates the education of paediatric nurses and nurse assistants whereas federal state laws regulate the education of branch nurse for care of the elderly.

Regulation of advanced practice

Post-basic education and specialization is regulated by the federal states.

Sources

German Nurses Association (2006) (<http://www.dbfk.de/english.html>) accessed 08/06/07

Moreno-Casbas T (2005) Nursing research in Europe. Scoping Report. Institute of Health, Carlos 111, Madrid

Personal communication (2007) Senior personnel in German nursing profession.

Ireland



Health Spend (Source: OECD 2006)

Population:	4.131 million (2005)
Health spend per capita (US dollars):	2596 (2004)
Health spend as % of GDP:	7.1% (2004)
Source of health spend:	80% publicly funded in 2004

Nursing Staff (Source: OECD 2006)

Number of nurses: 61,965 (OECD data)
 Number of practising nurses per 1000 head of population: 15 in 2004

Pre-registration Education

Levels/categories

One: registered nurse.

First level nurse

Provider: Third level (HE) institutions (universities and institutes of technology) working in partnership with local health services.

Entry qualification: HE criteria, consideration given to mature entrants.

Length: 4 years, final year emphasises consolidation with a prolonged rostered placement of 36 weeks during which time students are remunerated at 80% of first year staff nurse salary. (4.5 years for children's and general nursing (integrated)).

Exit qualification: bachelor's degree plus professional qualification for course followed.

Generalist or specialist education:

Specialist: nurse education is divided from the outset into five separate and independent programmes: children's and general nursing integrated (RCN&RGN); general nursing (RGN), intellectual disability nursing (RNID), midwifery (RM), and psychiatry (RPN).

Developments: there are discussions about the advantages and disadvantages of maintaining five separate programmes (Grant 2006)

Post-Registration Education and Career Paths

Specialist education

The following courses lead to registerable qualifications:

Children's nursing (not integrated with general nursing), a 1 year course leading to higher diploma

Midwifery: a 2 year course leading to higher or postgraduate diploma

Nurse tutor: programmes: offered at Masters level.

Public Health nursing: courses offered at post-registration level.

Post-registration courses in a wide range of specialities are available at higher diploma, post-graduate diploma and/or Masters level.

Advanced nursing practice

Specialist training is available for those who want to practise at an advanced level.

Masters, doctoral programmes

Masters courses in a variety of specialities/subjects are available. PhD programmes are available.

Education, management, research

Available at graduate diploma and masters level.

Regulation**Regulation of first level nurses**

The regulatory body is An Bord Altranais with authority derived from statute. Registration is mandatory.

Principal functions are to:

Provide for education and training, to establish and maintain a register, to enquire into allegations of unfitness to practise, and to provide guidance for the professions. The Board exercises its responsibilities by determining requirements for entry to training, the competencies that must be met for entry to the register and by specifying requirements and standards for pre-registration programmes.

Regulation of advanced practice**Sources**

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Grant A (2006) Undergraduate psychiatric nursing education at the crossroads in Ireland. The generalist vs. specialist approach. *Journal of Psychiatric and Mental Health Nursing* 13; 722-729

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Nursing Careers Centre (2006) *Nursing/Midwifery Career development, post-registration courses*. An Bord Altranais, Dublin

Italy



Health Spend (Source: OECD 2006)

Population:	58.135 million (2005)
Health spend per capita (US dollars):	2467 in 2004
Health spend as % of GDP:	8.7% (2004)
Source of health spend: 76.4%	publicly funded in 2004

Nursing Staff (Source: OECD 2006)

Number of nurses: 313,929 (Source: OECD data)
 Number of practising nurses per 1000 head of population: 5.4 in 2003

Pre-registration Education

Levels/categories

One: registered nurse.

Registered nurse

Provider: Universities, nursing is based in faculties of medicine.

Entry qualification: 18 years of age, passed the school leaving examination and a multiple choice entry examination.

Length: 3 years

Exit qualification: degree

Generalist or specialist education:

The course leads to qualification as a general nurse. Specialities are included in the course but speciality training is undertaken at post-registration level. There has been a long running debate over direct entry to paediatric nursing and health visiting. The Ministry of Health favoured direct entry whereas the national nursing organization opposed it. Although the debate has not been resolved, at least one university has introduced the direct entry paediatric nursing course (personal communication).

Midwifery is a separate 3 year course.

Post-Registration Education and Career Paths

Specialist education

Courses include: intensive care, palliative-oncology, wound care, mental health. Courses are provided by universities, healthcare institutions and continuous education agencies.

Advanced nursing practice

Under developed at present.

Masters, doctoral programmes

Masters programme: 2-year part-time course for nurse teachers, directors of nursing schools and managers.

Doctorates recently offered at some universities with courses under the supervision of the medical faculty.

Education, management, research

Career opportunities are underdeveloped in these areas.

Regulation

Regulation of first level nurses

Registers for nurses are kept by colleges of nursing in each province and allow practice throughout Italy. According to the law, the aims of the Provincial colleges are to protect the public and support and guarantee the professionalism of nurses. There is no central control/validation of degree courses.

Regulation of advanced practice

No regulation.

Sources

European Commission (2000) Nursing in Italy

(http://ec.europa.eu/internal_market/qualifications/docs/nurses/2000-study/nurses_italy_en.pdf)

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Personal communication (2007) Senior member of Italian nursing profession.

Japan



Health Spend (Source: OECD 2006)

Population:	127.757 million
Health spend per capita (US dollars):	2249e in 2003
Health spend as % of GDP:	8% in 2003
Source of health spend:	81.5% publicly funded (no date).
Public health insurance system with total population coverage.	

Nursing Staff (Source: OECD 2006)

Number of nurses: 1,149,813 (Source OECD data)
 Number of practising nurses per 1000 head of population: 9 in 2004

Pre-registration Education

Levels/categories

Two: registered nurse, licensed practical nurse

(Figures given by Japanese Nursing Association for 2003 indicate that of a workforce of 1,268,450 professionals, 772,407 were registered nurses and 424,343 were licensed practical nurses. There were also 45,976 public health nurses and 25,724 midwives).

Registered nurse

There are 3 routes to registration, all requiring a high school diploma for entry.

- i) Bachelor degree in nursing. A 4-year university based course.
- ii) Associate degree. A 3-year course based in a junior nursing college.
- iii) Diploma. A 3-year course based in School of Nursing.

Junior college courses place more emphasis on developing practically applicable skills than university courses. With increasing student demand for graduate status, some nursing courses are upgrading from a 3-year associate degree to a 4-year bachelors degree.

All qualifiers have to pass the Registered Nurse National Board Examination to gain a license to practise.

Generalist or specialist education:

The registered nursing course is generic. The course comprises: foundation studies, specialized basic studies and specialized studies in home health, adult, gerontology, child health, maternity, mental health. Certified specialization is at post-registration level (see post-registration education section below).

Midwifery and public health can be undertaken as a 4-year degree programme or as a 1-year course after a 3-year nursing course.

Licensed practical nurse (LPN)

(Known as assistant nurses)

Provider: an assistant nursing school

Entry qualification: junior high school diploma

Length: 2-years full-time or 4-years part time

Exit qualification: Obtained after passing assistant nursing examination which is offered at regional not national level.

After 3 years clinical experience, LPNs can take a 2-year nursing course and then take the government national examination for the registered nurse qualification.

Post-Registration Education and Career Paths

Specialist education

There are no state level qualifications for specialization. Various organizations and academic societies offer their own certification systems, including the Japanese Nursing Association (JNA) which offers the following:

i) Certified Nurse Expert

Certificates offered in: emergency, critical intensive care, WOC, hospice, cancer pain management, cancer chemotherapy, infection control, diabetes, infertility, neonatal intensive care nursing and areas of midwifery.

Eligibility criteria include: clinical experience above the defined standard in the specific area of nursing (for midwifery at least 5 years); either completed a regulated curriculum of 6 months, or passed a JNA Certified Nurse Expert examination (midwifery requires both).

Certificate renewal requires at least 2000 hours of nursing practice, a practice report and participation in designated CPD events.

ii) Certified Nurse Specialist

Administered by the Japanese Association for Nursing Programmes in University (JANPU). Certificates offered in cancer nursing, mental health, community health, gerontology, child health, adult health (chronic care). A maternity CNS is available for registered midwives.

Eligibility criteria include: demonstrating excellence in practice, consultation, co-ordination of services, intervention in ethical problems, education and research activities; having either a masters degree or clinical experience in defined areas; and passing the JNA certified Nurse Specialist examination.

iii) Certified Nurse Administrator (CNA)

Eligibility criteria include: nursing management experience above a defined level; masters degree majoring in nursing management; and passing JNA Certified Nurse Administrator examination.

Certificate renewal includes at least 2000 hours of nursing management practice and participating in CPD events.

All JNA certificates are renewable 5-yearly on the basis of performance reports.

Masters, doctoral programmes

Postgraduate nursing courses are now provided at 70 universities, 26 of which also offer doctoral courses.

Education, management, research

Qualifications for career paths as indicated above.

Regulation

Regulation of first and second level nurses

The Public Health Nurse, Midwife and Nurse law defines the terms and scope of duties for registered nurses, midwives and public health nurses and licensed practical nurses.

Registration is obtained by: qualifying from the course, passing the government examination and obtaining a licence from the Ministry of Health, Labour and Welfare. Licenced practical nurses obtain a licence from prefectural (regional) governors; this enables them to work in any prefecture. They require instruction from doctors, dentists, or registered nurses to perform nursing duties.

Pre-registration qualifications are not subject to renewal and continuing education is not mandatory.

Regulation of advanced practice

As at May 2005, JNA was actively lobbying for government to legislate mandatory clinical training after graduation for nurses, midwives and public health nurses, instead of relying on voluntary training offered at individual hospitals.

Sources

Japanese Nursing Association (2006) (<http://www.nurse.or.jp/jna/english.html>), accessed 6/06/07

Netherlands



Health Spend (Source: OECD 2006)

Population:	16.320 million (2005)
Health spend per capita (US dollars):	3041e in 2004
Health spend as % of GDP:	9.2%
Source of health spend:	62.3% publicly funded in 2004

Nursing Staff (Source: OECD 2006)

Number of nurses:	231,744 (OECD data)
Number of practising nurses per 1000 head of population:	4.2 in 2004

Pre-registration Education

Levels/categories

Two: there are two levels of registered nurse. In terms of European qualifications levels, nursing education is offered at level 5 (higher professional training) and level 4 (middle vocational training). The latter is at a lower academic level than the former. Both lead to the official title Registered Nurse.

Registered nurse: level 5

Education provider: University based. Known as HBOV training (Hogere Beroepsopleiding voor Verpleegkundigen)
 Length of course: 4 years
 Entry qualification: similar to British A' levels
 Exit qualification: degree.

Generalist or specialist education:

Generalist course with specialist options. After the first two years of training, students can choose between General Health Care nursing or Mental Health nursing (which also includes care for people with learning disabilities). The qualification enables nurses to practise in any field of health care, although employers tend to favour those with the appropriate specialism (Nolan and Brimblecombe 2007).

Registered nurse: level 4

Education provider. MBOV: Middelbare Beroepsopleiding voor Verpleegkundigen.

Length of course: 4 years

Entry qualification: similar to British O'levels

Exit qualification; diploma (vocational level).

Nurses with this qualification are also entitled to work in mental hospitals, mostly on long-term care wards and in psychiatry for older people (Nolan and Brimblecombe 2007).

Post-Registration Education and Career Paths

Specialist education

Post-registration courses are available in a variety of nursing specialisations.

Advanced nursing practice

Nine Polytechnic-type institutions offer professional masters programmes for advanced nursing practice.

Nurse practitioners exist and ICN apnetwork (2006) states that prescriptive authority has been obtained for nurse practitioners.

A 2-year course in clinical epidemiology for nurses is available at the Amsterdam Medical Centre and enables participants to execute or participate in clinical scientific research.

Scientific masters, doctoral programmes

Three universities (Maastricht, Utrecht and Groningen) offer a scientific masters programme in nursing science for nurses who have completed basic nurse education at level 5 (HBOV) but not at level 4 (MBOV).

Education, management, research

Some management courses for nurses are available.

Regulation

Regulation of first level nurses

Education is regulated by the Ministry of Education, Culture and Science. Nurses have to register on the BIG-Register. This is a division of the Central Information Centre for Professional Practitioners in Health Care which is an executive agency of the Ministry of Health, Welfare and Sport.

Periodic renewal of registration will be introduced in the near future (possibly 2008) to ensure that the knowledge and skills of those included in the BIG-register still meet the minimum standards of quality required.

Regulation of advanced practice

Nurse practitioners have to register in a specialists' register similar to the BIG-register.

Sources

BIG-Register (undated) (http://www.fepi.org/docu/countryprofile/Prof_NL_EN.pdf)

International Council of Nurses (2006) Press release on advanced nursing practice (<http://www.icn-apnetwork.org>)

Moreno-Casbas T (2005) Nursing research in Europe. Scoping report. Institute of Health, Carlos 111, Madrid

Nolan P, Brimblecombe N (2007) A survey of the education of nurses working in mental health settings in 12 European countries. *International Journal of Nursing Studies* 44, 407-414

Personal communication (2007) Senior members of Dutch nursing profession. September 2007.

Workgroup of European Nurse Researchers (2005) Nursing research in the Netherlands 2001 and annual report for 2005. <http://www.wenr.org/DesktopDefault.aspx?TabID=43>

New Zealand



Health Spend (Source: OECD 2006)

Population:	4.099 million (2005)
Health spend per capita (US dollars):	2083 in 2004
Health spend as % of GDP:	8.4% in 2004
Source of health spend:	Information not accessed

Nursing Staff (Source: OECD 2006)

Number of nurses: 38,941 (Source: OECD data)
 Number of practising nurses per 1000 head of population: 9.5 in 2004

Pre-registration Education

Levels/categories

Two levels: registered nurse and nurse assistant (latter used to be called enrolled nurse and a register and a roll was kept by the New Zealand Nursing Council. Now referred to as nurse assistant).

Registered nurse

Provider: 16 tertiary institutions (higher education)
 Entry qualification: university admission criteria
 Length: 3 years
 Exit qualification: Bachelors degree (level 7 on New Zealand qualifications framework).

All graduates have to pass a national examination prior to admission to the register.

Generalist or specialist education:

General course with opportunities to experience the main specialties.
 Midwifery is a separate 3 year course at pre-registration level.

Second level nurse

Provider: approved programmes at colleges that are approved by New Zealand Nursing Council to run bachelor degree programmes.
 Length: available information specifies this in terms of hours (350 theory and 650 practice).
 Exit qualification: certificate at level 4 on the New Zealand qualifications framework.

Generalist or specialist education:

Course comprises 2 modules: one general and one with a specialty focus.

Post-Registration Education and Career Paths

Courses on the list of post-registration programmes approved by the Nursing Council as at June 2005 are categorised as either Specialty Nursing Practice or Advanced Nursing Practice. Approval period for most is 5 years, a few are approved for 2years.

Specialist education

Courses available in a wide range of specialties.
 Provided by Health Boards, polytechnics and Institutes of Technology. Qualification is most likely to be a graduate certificate.

Advanced nursing practice

Courses available in wide range of specialities.

Provided by universities of technology, polytechnics of technology, universities and polytechnics.

Qualifications most likely to be postgraduate certificate, some are offered at Masters level.

Masters, doctoral programmes

Available at some universities.

Education, management, research

Career pathways in both areas available.

Regulation

Regulation of first and second level nurses

The Nursing Council of New Zealand is the statutory authority governing the practice of nurses. The Council's primary concern is public safety. In 2003, the Health Practitioners Competence Assurance Act established a common and consistent framework across the health professions, while retaining separate registering bodies, including a new separate Midwifery Council. The Council is also responsible for professional conduct matters.

The Council sets and monitors standards, keeps a register and issues annual practising certificates. In 2004 the nursing registers were replaced by four scopes of practice for registered nurse, nurse practitioner, nurse assistant and enrolled nurse.

Regulation of advanced practice

In 2005 Council published a framework for post-registration education in support of its continuing competence requirements. Up to 5% of practitioners will be audited each year. Nurse practitioners are one of the four parts of the register.

Sources

Moore D (2005) *Assuring fitness for practice: a policy review commissioned by the Nursing and Midwifery Council nursing task and finish group*. NMC, London. pp. 55-65

Nursing Council of New Zealand (2007) (<http://www.nursingcouncil.org.nz>), accessed 8/06/07

Norway



Health Spend (Source: OECD 2006)

Population:	4.623 million (2005)
Health spend per capita (US dollars):	3966 in 2004
Health spend as % of GDP:	9.7% in 2004
Source of health spend:	publicly funded.

Nursing Staff (Source: OECD 2006)

Number of nurses: 68,883 (OECD data)
 Number of practising nurses per 1000 head of population: 14.9 in 2004

Pre-registration Education

Levels/categories

One: registered nurse.

Registered nurse

Provider: university or university college (28 in total). Most are managed by state education authorities, although some are privately owned.

Entry qualifications: 13 years general education

Length of course: 3 years

Exit qualification: bachelor degree programme.

Generalist or specialist education

General education with specialization at post-registration level

Post-Registration Education and Career Paths

Specialist education

Specialist post-graduate courses of at least 1 year in length are available in a wide range of areas with most common being: intensive care, anaesthesia, theatre, psychiatry, public health, midwifery, geriatric and oncology. Clinical experience is required before applying and the length of experience depends on the programme.

Advanced nursing practice

University degrees in nursing science are offered at masters level (2 year courses) and can be entered after the bachelors degree programme. Most applicants, however, also have clinical experience and a postgraduate speciality qualification.

There are also masters degree courses on subjects such as nursing theories, nursing philosophy of science, nursing ethics, and advanced research methods. These courses are completed with a thesis.

Development of new advanced practice programmes is reported in ICN apnetwork press release for 2006.

Masters, doctoral programmes

A few are offered, including the masters described in advanced nursing practice above. A masters degree is required for entry to the 3 year doctoral programme, which comprises 1 year theoretical studies in nursing science and methods and 2 years for a dissertation.

Education, management, research

Career paths are available in all three; nurse lecturers are expected to have a masters degree.

Regulation**Regulation of first level nurses**

The Ministry of Education and Research regulates nurse education. The Ministry of Health and Care Services issues the license for practice as a Registered Nurse after an approved Bachelor Degree.

Regulation of advanced practice

The Ministry of Education and Research regulates advanced practice.

Sources

International Council for Nurses (2006) Press release on advanced nursing practice (<http://icn.apnetwork.org>)

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Spain



Health Spend (Source: OECD 2006)

Population:	43.398 million (2005)
Health spend per capita GDP (US dollars):	2094e in 2004
Health spend as % of GDP:	8.1% in 2004
Source of health spend:	71% publicly funded in 2004

Nursing Staff (Source: OECD 2006)

Number of nurses: 321,145 (Source: OECD data)
 Number of practising nurses per head of population: 7.4 in 2004

Pre-registration Education

Levels/categories

One: registered nurse.

Registered nurse:

Provider: Universities (110 in total). Most (85%) are managed by the state education authorities.
 Entry qualification: passing high school secondary education and a university access examination.
 Length of course: 3 years
 Exit qualification: was originally a diploma but many universities (47 by 2006) have developed bachelor of nursing science degree programmes.

Generalist or specialist education:
 General nurse education followed by specialization at post-registration level.

Post-Registration Education and Career Paths

Specialist education

Post-registration courses are available in midwifery (2 years), mental health (1 year), care of the elderly, paediatrics, community health, special care nursing and nursing management. The midwifery qualification is recognized in law.

Advanced nursing practice

As at 2006, graduate-level advanced programmes have been developed at several universities leading to a Master of Nursing Science. The programme includes nursing research, teaching, management and advanced care.

Doctoral programmes. These were reported in 2005 as not being recognized by the Ministry of Education and Science but by 2006 agreement had been reached with some regional governments to do so.

Masters, doctoral programmes

Masters – see above
 PhD study for nurses is available at 5 nursing and 2 physiotherapy departments.

Education, management, research

Careers available in both. Qualifications available at masters level.

Regulation

Regulation of first level nurses

Education is regulated by the Ministry of Education.

From 2001, registration is the responsibility of the General Council of Nursing which is responsible for regulation of nursing practice. All nurses must be registered with their local Provincial College of Nurses.

Regulation of advanced practice

A move towards this occurred in 2006, see above under Advanced practice.

Sources

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Sweden



Health Spend (Source: OECD 2006)

Population:	9.030 million (2005)
Health spend per capita (US dollars):	2825e in 2004
Health spend as % of GDP:	9.1% in 2004
Source of health spend:	85% publicly funded in 2004

Nursing Staff (Source: OECD 2006)

Number of nurses: 93, 009 (OECD data) includes registered nurses only.
 Number of practising nurses per 1000 head of population: 10.3 in 2003

Pre-registration Education

Levels/categories

Two: registered nurse and licensed (enrolled) nurse.

Registered nurse

Provider: University (about 25 departments)
 Entry qualification: completion of secondary education
 Length of course: 3 years
 Exit qualification: Bachelor of Science nursing degree.

There are two further programmes:

4 year course that includes 3 years general nursing and 1 year social care

4 year course that includes 3 years general nursing and 1 year informatics (IT) in health cares

Generalist or specialist education.

Generic nursing course with specialization at post-registration level.

There is a branch nurse programme in diagnostic radiology.

Licensed (Enrolled) nurse

Provider: upper secondary school
 Length: 3 years

Generalist or specialist education

Licensed nurses can choose to specialise in psychiatric nursing during the course.

Post-Registration Education and Career Paths

Specialist education

Courses in post-registration specialities are available. In 2007 these included: primary health care, paediatrics, intensive care, theatre, psychiatry, care of the elderly, oncology, anaesthesia, pre-hospital medical and surgical ward, and occupational health.

2007 information indicates that psychiatric nursing is a 1-year full-time or 2-year part-time course.

Diploma in district nursing. 1 year course taken after 2 years nursing experience. Courses provided by universities.

Advanced nursing practice

Some courses are available e.g. Advanced nursing practice in primary care offered at Department of Health Sciences, University of Skovde. After obtaining 90 ECT credits, nurses obtain competence as an Advanced nurse practitioner in primary health care. A further 90 credits leads to a masters degree.

Clinical nurse specialist roles were reported as being developed in 1998 (Lorenson *et al* 1998). Development of new advanced practice programmes reported in ICN apnetwork press release of 2006.

Masters, doctoral programmes

Both are available. Masters courses include those focusing on research. The minimum length of the doctoral programme is four years (Shields *et al* 2002).

Education, management, research

Universities provide courses in health administration, leadership and teaching. All university courses have to provide some research training as part of their programmes.

Regulation**Regulation of first level nurses**

Licensing of health professionals, including registered nurses, is the responsibility of the National Board of Health and Welfare.

Enrolled nurses are not regulated.

Regulation of advanced practice

Specialist nurse titles have been protected by law since 2001. Advanced practice was reported as not regulated in 2000, although there were plans at that time to do so.

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University of Skovde (2003) Advanced Nursing practice in primary Health Care website (www.his.se)

Switzerland



Health Spend (Source: OECD 2006)

Population:	7.438 million (2005)
Health spend per capita (US dollars):	4077e in 2004
Health spend as % of GDP:	11.6% in 2004
Source of health spend:	58.4% publicly funded (no date)

Nursing Staff (Source: OECD 2006)

Number of nurses: 79,587 (OECD data)
 Number of practising nurses per 1000 head of population: 10.7 in 1998

Pre-registration Education

Levels/categories

One: registered nurse

Registered nurse

Currently in a period of transition to two routes: there will be:

- 3 year diploma based in a school of nursing (higher vocational training)
- 3 year Bachelors degree in a University of Applied Science (higher education).

With the introduction of the Bologna system, basic education will be obtained at BSc level.

Entry qualification: 10-12 years schooling.

Generalist or specialist education:

Until 1991, specialised basic educational programmes existed in general, psychiatric and paediatric nursing and midwifery. After 1991, all nursing education became generalist with specialisation at post-registration level.

Post-Registration Education and Career Paths

Specialist education

Specialty training programmes exist and include: psychiatry, paediatrics, oncology, palliative care, nephrology, cardio-vascular, intensive care, anaesthesia, operating theatre, gerontology, diabetes, infection control, and long-term care. Duration is usually one and a half to two years in training.

Advanced nursing practice

University programmes in Basle (German speaking) in Advanced Nursing Practice leading to and MSc and doctoral degree. Another will be started in Lausanne (French speaking) in 2008. Various post degree programmes are being offered in the Universities of Applied Science.

Development of new advanced practice programmes reported in ICN apnetwork press release in 2006.

Masters, doctoral programmes

Details under Advanced Nursing Practice.

Education, management, research

Courses are available in management at ward level, management at hospital level, professional teaching and director of nursing school.

Regulation

Regulation of first level nurses

Regulation was formerly through the Red Cross; it is now at Federal level through various mechanisms.

Regulation of advanced practice

There is no national accrediting body for specialist programmes.

Sources

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United Kingdom



Health Spend (Source: OECD 2006)

Population:	59,989 million in 2005
Health spend per capita (US dollars):	2508d in 2004
Health spend as % of GDP:	8.1% in 2004
Source of health spend:	86% publicly funded in 2004

Nursing Staff (Source: OECD 2006)

Number of nurses:
 United Kingdom: 551, 899 (Source: calculated from OECD data)
 Number of nurses and midwives on the effective register: 672,897 in 2005 (Source: NMC 2005)

Number of practising nurses per 1000 head of population: United Kingdom: 9.2 in 2004

Pre-registration Education

Levels/categories

One: registered nurse

Registered nurse

Provider: Universities

Entry qualification: 17 years of age, 11-12 years general education and are required to have certain grades in specific subjects. In order to widen access to mature students and others who lack traditional educational qualifications, many universities have link schemes with further education colleges running access courses and vocational qualification schemes to give special consideration to those wanting to apply for nurse diploma courses.

Exit qualification: diploma or degree in England, degree only in Wales, Scotland, and Northern Ireland.

Length: diploma courses are 3 years, degree courses 3 or 4 years.

Generalist or specialist education.

Common foundation programme followed by specialization and qualification in: adult, child, mental health or learning disability nursing.

Midwifery is a separate course.

Post-Registration Education and Career Paths

Specialist education

Variety of subject areas and variety of levels: part of continuing professional development programmes; post-graduate diplomas; bachelors and masters degrees.

Advanced nursing practice

Nurse practitioner (NP) and clinical nurse specialist (CNS) posts are available in a wide range of areas. A list of NP courses published by the Royal College of Nursing (RCN) indicates that some but not all are at masters degree level (RCN 2005)

Consultant nurse posts have been introduced to improve the clinical career structure.

Masters, doctoral programmes

Many universities offer Masters and PhDs in nursing/healthcare. Some universities offer a taught doctorate with a professional orientation.

Education, management, research

Wide range of courses are available at a variety of levels and diverse career paths exist.

Regulation

Regulation of first level nurses

The regulatory authority is the Nursing and Midwifery Council for the United Kingdom (NMC). The Council's authority is derived from statute and it has a statutory obligation to protect the public. The Council Assures fitness for practice at the point of registration through: determining standards for education and entry to the register; assuring standards through course and institutional approval; quality monitoring, and periodic review. The council is also responsible for professional conduct matters and ensuring continuing competence.

In order to practise in the UK, nurses have to be registered with the NMC. This has to be renewed every three years and is dependent on evidence of continuing professional development (PREPP).

Regulation of advanced practice

As at 06.07, the NMC stated that work is in progress on legislation to register advanced nursing practice and that competencies are being mapped to Knowledge and Skills framework.

Sources

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United States



Health Spend (Source: OECD 2006)

Population:	296,410 million (2005)
Health spend per capita (US dollars):	6102 in 2004
Health spend as % of GDP:	15.3% in 2004
Source of health spend:	45% publicly funded (no date)

Nursing Staff (Source: OECD 2006)

Number of nurses: 2,341,639
 Number of practising nurses per 1000 head of population: 7.9 in 2002

Pre-registration Education

Levels/categories

- i) Registered nurse
- ii) Licensed practical nurse

Registered nurse

There are 3 routes to registration, of differing lengths and each with a different provider:

- i) 4 year bachelor's degree course BSN (university),
- ii) 2 year associate degree ADN (diploma) (Community college)
- iii) 3 year Hospital school diploma (Hospital school of nursing)

Entry qualifications: high school diploma or equivalent for baccalaureate degree.

Qualifiers from all programmes also have to pass a national examination held by the National council of State boards of Nursing (NCSBN) designed to test knowledge, skills and abilities essential to safe and effective practice at entry level.

Registered nurses with associate degrees or diplomas can take degree completion programmes leading to baccalaureate or masters degrees.

Generalist or specialist education:

Nurse education is generic with specialization at post-registration level.

Licensed practical nurse (LPN)

Provider: community colleges

Length: 1 year

Exit qualification: diploma

LPNs can continue their education through baccalaureate programmes.

A report from the National Council on Nursing Education, cited on website of the American Association of Colleges of Nursing (AACN) recommends that at least two thirds of the nursing workforce holds a baccalaureate degree or higher by 2010 compared to the current 40% (not clear if referring to registered nurses or to registered and practical nurses). AACN states that degree prepared nurses are in high demand.

Post-Registration Education and Career Paths

Specialist education

Largest provider of courses is the American Nurses Credentialing Centre (ANCC). It offers advanced practice courses in five specialty areas: gerontology, medical-surgical, paediatrics, perinatal and

psychiatric and mental health nursing. Some courses are offered at Nurse Practitioner (NP) and Clinical Nurse Specialist (CNS) level.

It certifies healthcare providers, accredits educational providers, approvers and programs and was established by the American Nurses Association in 1973. ANCC certificates are recognized and accepted by all state boards of nursing and US military and are accredited by the American Board of Nursing Specialities (ABNS) and the National Commission of Certifying Agencies (NCCA).

Advanced nursing practice

Advanced practice nurses (APNs) include four categories

i) Nurse practitioners (NP)

Posts are available in general nursing and a wide range of specialities.

Educational requirements: four years of college leading to BSc in nursing or a related field and approximately two years of graduate school to obtain a masters degree as a nurse practitioner. Course graduates then take an ANCC Nurse Practitioner examination.

ii) Clinical nurse specialists (CNS)

In adult health, adult or child and adolescent psychiatry and mental health, child and adolescent psychiatric and mental health, gerontology, paediatrics, and public/community health. Programmes are offered at masters or doctoral level at accredited colleges. Course graduates then take an ANCC clinical nurse specialist examination.

iii) Certified nurse-midwives (CNM)

iv) Certified registered nurse anaesthetists (CNRA)

(Typically prepared in masters programmes)

There is a move to develop a clinical nurse leader post which will be an advanced generalist role offered at masters level.

Masters, doctoral programmes

Widely available for clinical, education, management and research careers.

Education, management, research

Wide range of career pathways available.

Regulation

Regulation of first level nurses

Nursing is regulated by licensing authorities in each jurisdiction (state or territory). Each has a Nurse Practice Act or similar which establishes a board of nursing that has the legal authority to regulate nursing.

All the boards of nursing are members of the National Council of State Boards of Nursing (NCSBN), a not for profit organization. It provides licensing examinations (for registered and licensed practical nurses) used by boards of nursing in making licensure decisions. Its use by all regulators underpins mutual recognition of licensure.

Regulation of advanced practice

Nurse practitioners are legislated by the Nurse Practice Act in each state and may also be credentialled nationally in their area of practice.

Sources

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