



Models of Child Health Appraised

(A Study of Primary Healthcare in 30 European countries)

Work Package 2: Nurses’ preparedness for practice.

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1.0 Introduction

Globally, nurses are the largest professional group in the health force. They play a key role in delivering care to children in the community and provide prevention and health promotion as well as curative services to children, young people and their families. Advances in the field of medicine have increased the number of children living longer with complex conditions, and with that, the need for an optimal environment with high-quality health care. The move towards primary care (World Health Organization (WHO), 2008) attempts to facilitate the psychosocial needs of children with complex care needs (CCN) and their families. The knowledge and training acquired by the nurses working with these children and their families have to be targeted in order to deliver optimal and high-level care (WHO, 2008).

The WHO has stressed nurses' role in public health and sees the need to focus on family health and community health nursing and to renew and upgrade education and training in this respect (WHO, 2013). In order to provide optimal care, it is vital that nurses receive timely and optimal training. Education plays a key role in developing nursing competencies. Nurses who have a higher level of education have been found to deliver care that leads to better patient outcomes (Praxmarer-Fernandes et al., 2017). The right to care is also acknowledged by the Paediatric Nursing Associations of Europe (PNAE):

“Children and adolescents (young people) have the right to be cared for by appropriately qualified and educated nursing staff. Children and their families/guardians have a right to know that the nurse who cares for their child is specifically educated and competent to do so [...] (Paediatric Nursing Association of Europe, 2015).

However, the level of education offered for nurses across Europe varies considerably (Praxmarer-Fernandes et al., 2017). Article 31 of The Professional Qualifications EU Directive 2005/36/EC amended by the Directive 2013/55/EU, regulates the undergraduate training of nurses responsible for general care. This is based on a minimum of three years of study and *“shall consist of at least 4600 hours of theoretical and clinical training”*. Furthermore, it specifies that this training shall include several areas of knowledge, in which is included *“child care and paediatrics”*, either as specific area of focus or integrated within other subjects (European Parliament and Council Directive, 2005, 2013). This EU Directive provides a general framework for nursing curricula across Europe, giving a general description of the competencies required for a general nurse. However, it does not address differences between countries and does not give guidance on the specific content and skills that are necessary for each of the areas that it mentions, including the nursing care of children. Each country can interpret the Directive as they see fit.

Specialist / postgraduate nurse training is not standardised at EU level. PNAE has mapped paediatric nursing education across Europe, identifying the different options available that nurses have in order to deliver specialised care to children and young people. However, they do not focus on the training that nurses receive in general nursing programmes regarding children care, and in particular to children with CCN.

Benner, Sutphen, Leonard and Day (2010) calls out for a radical transformation of nurse education at national levels in order to meet today's CCN (Benner et al., 2010, Benner, 2012). In order to propose change, it is important to map existing educational requirements and study the content of nursing curricula, being aware that professional practice is more than the sum of these parts. A better understanding of the curricula at nursing schools can contribute to the further development of nursing education. This development can result in improved preparedness for practice, and in consequence, the improvement of health care delivery to children and their families.

1.1 Aims and objectives

The purpose of this task was to analyse nurses' preparedness for the care of children with CCN and their families in the community in 30 European countries. This involved examining respective educational requirements and the curriculum documents of undergraduate nursing programmes. The specified research objectives were to:

1. Map nursing qualifications required in each country to work with children with CCN in the community.
2. Identify and analyse nursing curricula documents, for content on child care, paediatrics, and children with CCN.
3. Identify European standards in general nursing programmes for delivering care to children with CCN.
4. Identify and describe possible breaches in optimal nursing education for delivering care to children with CCN in the European context.

2.0 Methodology

A questionnaire, for distribution by CAs, was developed in order to explore the qualifications required for nurses caring for children with CCN in the community. The questionnaire also included a request for nursing curriculum documents. According to Smith and Morgan (2010), there is a paucity of research on university curricula. Nursing curriculum documents detail the units in a programme of study that is taught over time (the hours of which may be prescribed either nationally or through EU directives) and that lead to accreditation as a nurse (Smith and Morgan, 2010). It was postulated that an analysis of curricula documents with a focus on children would give information on how nursing care of children is described within the programme. We acknowledge that some countries require specialised training to deliver care to children with CCN, but for the purposes of this study, only general nursing curricula were examined.

2.1 Design

A non-experimental descriptive study design with a qualitative element was adopted. It incorporated an inductive summative content analysis (Hsieh and Shannon, 2005) to investigate child-related content in nursing curriculum documents. This method was chosen to facilitate the analysis process, as it takes into consideration variations in the document styles with both narrative texts and bullet point lists (Sjolin et al., 2014).

2.2 Questionnaire description

The authors developed the questionnaire (Appendix 1) with a focus on subjects related to children and child health. The questionnaire was divided into two main sections. Section 1 explored the curriculum documents of undergraduate and postgraduate nursing programmes.

Original or English translated versions of general and / or paediatric nursing curricula were requested from CAs in 30 countries. To ensure that the document requested adequately represented nurse training in the country, it was specified that, as far as possible, documents from the university department or nursing school with the largest number of nursing graduates per year were required. A link to an example curriculum with the type of detail requested was sent in order to achieve consistency in the sample of documents requested for analysis.

Information on paediatric nursing education available across Europe is accessible from the PNAE. The European Observatory has also compiled information on nursing education within their Health in Transition reports (European Observatory on Health Systems and Policies, n.d¹).

In order to understand which paediatric options were available across countries, a table with information gathered from these two sources were incorporated in Section 1 (*Paediatric nurse education across Europe* inside the Appendix 1). The CAs sourcing the data were asked to confirm that the information provided in the table was correct and updated for their country. In addition, the CAs were also asked to obtain the number of nurses that complete paediatric nurse education each year for their country.

Section 2 sought information on the qualifications required for nurses to deliver care to children with CCN. To achieve this information, a general question was asked: *In your country, can nurses with a general nursing qualification look after children with complex health care needs in the community?* A dichotomous answer was requested (*Yes / No*). If the answer was *No*, the agents had to specify which qualification was required, if it was compulsory, and to provide an original or an English translation of the curriculum document.

2.3 Validation

A protocol for sending questions to the CAs was developed within the MOCHA project. Two different review procedures were established before circulating the surveys. First, the document had to be ratified by the Principal Investigator (PI), Deputy PI and Research Coordinator. Then, an External Advisory Board (EAB) discussed the questions and provided feedback to the research team. To validate the answers presented in the questionnaires and the content of the curricula documents, further clarifying questions were sent to the CAs. This gave the research team the possibility to achieve a more accurate interpretation of the information provided.

2.4 Data collection and distribution

Following established protocol, once the survey was reviewed, it was sent to the CAs through the Research Coordinator in July 2016. The agents had the responsibility to deliver the questions to the appropriate experts in their respective countries or of finding the required data from other sources (ex. national documents). When the CA completed the questionnaire, it was sent back to the Research Coordinator, who returned it to the research team between August 2016 and March 2017.

2.5 Sample

The questionnaire was sent to the CA in each of the 30 countries. Responses were received from 23 countries (79%) at the time of the analysis. Belgium, Luxembourg, Slovakia, Slovenia and United Kingdom did not provide any responses to the questionnaire within the specified time

¹ No date

frame. Denmark responded after the analysis for this report had been processed and is not included in the analysis.

2.6 Data analysis

Descriptive statistics were used for analysing the results of the survey on nursing qualifications. Corrections, comments and specifications in the free text boxes offered supplementary information on paediatric training options available for nurses. For example, from one country it was stated, “[...] *there is a specific Paediatric Nursing Specialization established in 2008. It is 40 weeks long*”. From this statement, the research team extracted that paediatric nursing was a specialised / postgraduate programme of 40 weeks duration.

In the curricula analysis, several steps were taken. Firstly, the curriculum content received from each country was transferred to a Word document and, if necessary translated to English using an online tool (<https://www.onlinedoctranslator.com/>). Secondly, an overarching analysis of the curricula documents was performed in order to get an overview of all modules that focused on child care. To achieve this, core modules related to children (e.g. Paediatrics) and other modules on other subjects where children were mentioned (e.g. pharmacology, mental health care) were also examined. The core modules related to children were identified by examining the titles of all modules in the curricula. The identification of child related topics mentioned within other modules was conducted by searching child-related search terms previously agreed on by the research team (Appendix 2).

A summative inductive content analysis of each curriculum was then carried out in order to understand better the written content related to the child. The content related to the care of the child formed the units of analysis. These units were then transferred to an Excel sheet and relevant keywords were extracted. An example of this process is shown in table 2.1. A grouping process was then carried out in order to categorise and give contextual meaning to the keywords obtained (Cavanagh, 1997, Elo and Kyngas, 2008). This process generated several subcategories, which were named using content-characteristic words. Following the same procedure, the subcategories were then grouped together into main categories (Elo and Kyngas, 2008). In order to understand the use of the keywords in their context, a process of quantification was conducted. According to Hsieh and Shannon (2005), “*this quantification is an attempt not to infer meaning but, rather, to explore usage*” (Hsieh and Shannon, 2005). The research team discussed the categorisation in depth before reaching consensus on the interpretation, categorisation and extraction of keywords.

Table 2.1 Example of keywords extracted from the units of analysis

Unit of analysis	Keywords
The <u>nature, diagnosis</u> and <u>treatment of childhood diseases</u> . The main emphasis is on the <u>clinical signs and symptoms</u> and the <u>prevalence of childhood disease</u> in the populations and the <u>most common medical and surgical treatments of</u> <u>these diseases</u> .	Nature of childhood diseases Diagnosis childhood diseases Treatment childhood diseases Clinical signs and symptoms of childhood diseases Prevalence of childhood disease Common medical treatments of childhood diseases Common surgical treatments of childhood diseases

3.0 Results

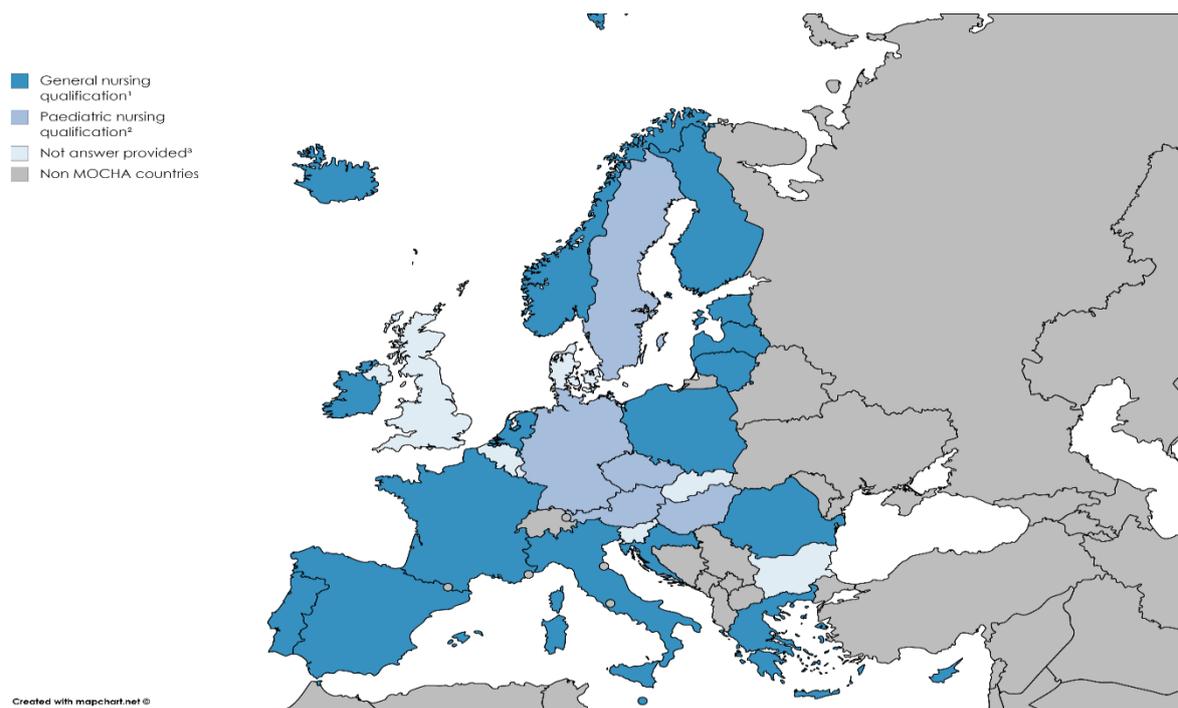
The results are divided into two sections: 3.1 on *Nursing qualifications* and 3.2 on *General nursing curricula*. The nursing qualifications section provides an overview of the nursing

training requirements for caring for children with CCN in the community in Europe. The general nursing curricula section will present a contextual examination of the content related to child care and paediatrics in the curriculum documents provided by the respondent countries.

3.1 Nursing qualifications

Identifying the training requirements for nursing children with CCN in the community provides background information on the level of education required to provide nursing care for these children. Figure 3.1 is a visual overview of the training requirements across Europe. The findings presented in here are based on the responses from the CA questionnaire².

Figure 3.1 Nursing training requirements to look after children with CCN



¹ Cyprus stated that paediatric nursing was not offered in the community.

² Sweden stated that either community or paediatric nursing training was required to look after children with CCN in the community.

³ Denmark responded after the analysis for this report had been processed and is not included in the analysis.

No specialised training is required to deliver community nursing care to children with CCN in 73.9% ($n = 17$) of the countries. Croatia, Estonia, Finland, France, Greece, Iceland, Ireland, Italy, Latvia, Lithuania, Malta, Netherlands³, Norway, Poland, Portugal, Romania and Spain reported that a general nursing qualification was the only requirement. General nursing training was of four years duration in eight countries (47.1%), three years for seven countries (41.2%), and three and a half years for two countries (11.8%) (Table 3.1).

Table 3.1 Duration of general nursing programmes for countries where this is the only qualification required for caring for children with CCN

Duration	Countries
3 years	Croatia, France, Italy, Malta, Norway, Poland, Romania
3.5 years	Estonia, Finland

² The duration of the general nursing programmes was extracted from the curricula or from the links provided in the questionnaire.

³ In Netherlands, it was specified that general nurses are allowed to work with these children only for performing general tasks. A specialisation is required for tasks that are more complex.

Although a specific paediatric training is not required in these countries, the majority (70.6%, $n = 12$) offer undergraduate and / or specialised / postgraduate programmes with a focus on children's nursing. The most common being a specialised / postgraduate training of one year duration (Table 3.2). Only Estonia, Finland, Lithuania, Malta and Romania (29.4%) stated that no paediatric options were available for further training.

Table 3.2 Availability of undergraduate and postgraduate paediatric nursing options in countries where general nursing is the sole requirement for working with children with CCN

Country	Paediatric nursing options available	Duration
Croatia	- Specialisation / postgraduate training in paediatric nursing	40 weeks
France	- Specialisation / postgraduate training in paediatric nursing	1 year
Greece	- Specialisation / postgraduate training in paediatric nursing	1 year
Iceland	- Specialisation / postgraduate training in paediatric nursing	2 years
Ireland	- Undergraduate in paediatric nursing ^a - Specialisation / postgraduate training in paediatric nursing	4.5 years (undergraduate) 1 year (postgraduate)
Italy	- Undergraduate in paediatric nursing - Specialisation / postgraduate training in paediatric nursing	3 years (undergraduate) 1 year (postgraduate)
Latvia	- Undergraduate specialisation in paediatric nursing	1 year ^b
Netherlands	- Specialisation / postgraduate training in paediatric nursing	13 - 16 months
Norway	- Specialisation / postgraduate training in paediatric nursing	1.5 years
Poland	- Specialisation / postgraduate training in paediatric nursing	810 hours
Portugal	- Specialisation / postgraduate training in paediatric nursing	1.5 years
Spain	- Specialisation / postgraduate training in paediatric nursing	2 years

^a In Ireland, the undergraduate in children's nursing degree includes modules for both general nursing and children's nursing. The successful completion of this degree provides the right to practice as either a children's nurse or as a general nurse.

^b This one year of specialisation in Latvia is performed in the fourth year of the general nursing studies. Nurses ending with a specialisation different to paediatrics (e.g. surgical nursing or mental health nursing) are also allowed to work with children with CCN.

Austria, Czech Republic, Germany, Hungary and Sweden (21.7%) stated that a paediatric nursing qualification was required to care for children with CCN in the community. In Austria⁴, this qualification is achieved by either studying a paediatric undergraduate degree of three years duration at bachelor's level (direct entry) or as a paediatric postgraduate programme of one year duration. In the Czech Republic, a postgraduate training in paediatric nursing is mandatory for delivering care to children with CCN. General nurses with a bachelor degree (BSc) and twelve months of general nursing practice in the field of child care can access this specialisation. Diploma Specialised nurses (DiS) (trained at vocational schools) can access this specialisation by doing a BSc in nursing. They are usually⁵ admitted directly into the second or third year. After completing the BSc degree and with twelve months of general nursing practice in the nursing care of children they can access the paediatric nursing specialisation. In Germany⁶, the specific paediatric qualification is reached by doing a three year paediatric undergraduate degree at a vocational school. If the applicant is a general nurse, this training is

⁴ In Austria, nurses with a general nursing qualification can work with children with CCN. However, in practice only paediatric nurses look after children with CCN in the community.

⁵ "Usually" implies that not all DiS students are entitled to start a nursing BSc at the second or third year of the degree. It will depend on the study plan of the previous vocational school. If the DiS nurse ended his/her nursing studies 5-7 years ago this entitlement it is not applicable.

⁶ In Germany, a specific paediatric qualification was stated as not being mandatory. However, paediatric nurses normally work with these children, general nurses can be assigned in certain cases. From 2020 the vocational training for the first two years will be a generalist training. Paediatric nursing specialization will be possible from the third year of this vocational training. However, generalist nurses will be also allowed to care for children (the first nurses that will have gone through this program will start working in 2023).

reduced to one and a half years. In Hungary, a three year paediatric undergraduate degree at a vocational school is mandatory. In Sweden⁷, after completion of a three years general nursing degree at bachelor level, a specialisation / postgraduate training in paediatric or community nursing is necessary in order to work with children with CCN. The duration of the paediatric training is one year, and applicants need one year of nursing experience to access this training.

Only Cyprus (4.3%) stated that they do not have paediatric nursing service in the community. However, school nurses (called health visitors) are responsible for the primary health care of the children in school settings. For this country, general nursing programmes have a duration of 4 years.

3.2 General nursing curricula

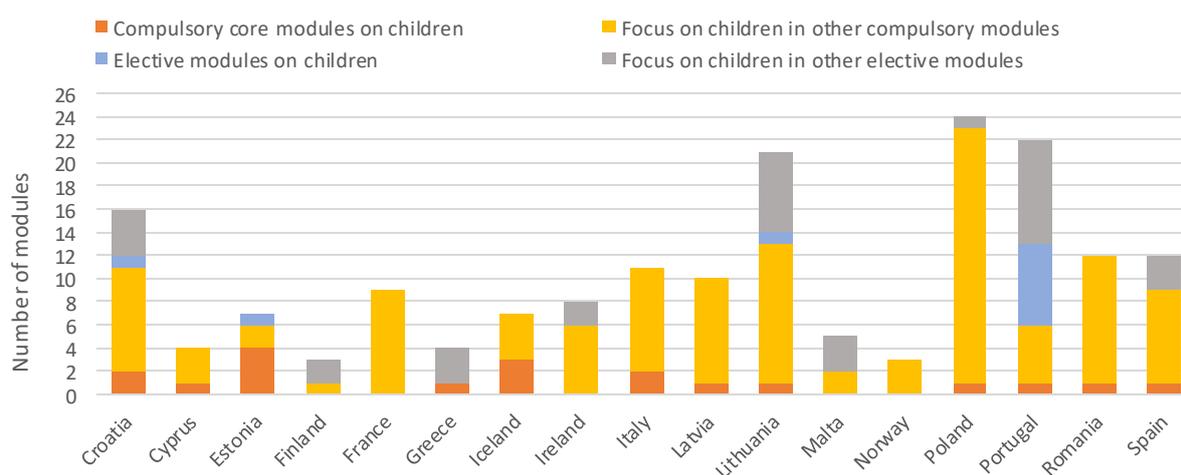
Due to the high number of countries that only require a general nursing qualification for delivering care to children with CCN in the community (73.9%, $n = 17$), a comprehensive analysis of these curricula was performed. Documents provided by the CAs come from the institution with the largest number of nursing graduates per year⁸. Despite not having paediatric nursing services in the community, general nursing curriculum from Cyprus was provided by the CA and has been included in this section.

From the seventeen curricula documents gathered, almost half (47.1%, $n = 8$) were provided in English language. All the documents came from public institutions, as opposed to private academic centres or healthcare facilities.

3.2.1 Overarching analysis

This analysis was performed in order to get an overview of the modules that had a focus on childcare. Appendix 3 contains a glossary of terms with definitions of such modules. Figure 3.2 shows the distribution across countries of the modules that have content related to the care of children within their curricula.

Figure 3.2 Distribution of child related content across the different modules in the curriculum.



⁷ In Sweden, the required qualifications were stated as not mandatory. That is because of a lack of specialised nurses, doing quite common to hire nurses without paediatric specialisation. In preventive care for children, many nurses have community specialisation instead of a paediatric specialisation.

⁸ In **Italy**, the general nursing curricula proposed by the CA do not provide a description for all the modules or for the module focus on child care. The research team suggested seeking a curriculum document from Florence University. CA agreed on this curriculum before performing the analysis. In **The Netherlands**, the document proposed by the CA does not provide detailed information on the modules. For that reason, it has not been included in the general nursing curricula analysis. In **Spain**, the university department with the largest number of nursing graduates per year had no available data on the different modules. The curricula chosen for analysis is from the Universidad Autónoma de Madrid, as suggested by the CA.

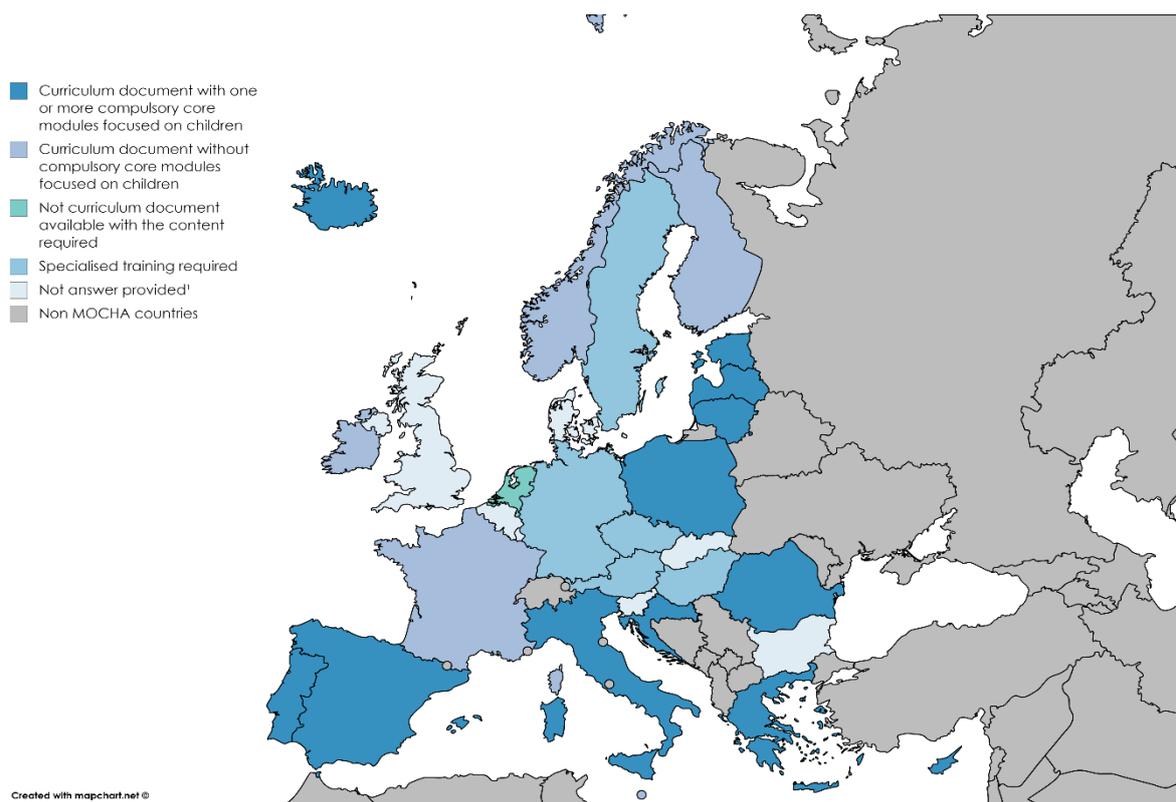
In twelve of the seventeen countries (70.6%) the main bulk of the child related content was within other compulsory modules (ex. children mentioned as part of a pharmacology module). In four countries, (23.5%) it was mainly within other elective modules. Only Estonia (5.9%) had the main child related content as compulsory core modules.

Compulsory core modules

This section describes the characteristics of all the compulsory core modules that focused on the care of the child. Almost three-quarters of the curricula (70.6%, $n = 12$) offered one or more of these modules (Figure 3.3). The emphasis in the modules (paediatrics) was similar for the majority of countries. The workload assigned to each module was variable, having from one to sixteen ECTS. More than two-thirds of the modules analysed across countries (73.7%, $n = 14$) differentiated between hours expended on theoretical and practical training⁹. In nine of the countries (75%), the modules on the care of the child were concentrated in one specific year. In three countries, (25%) they were spread across the duration of the training (Table 3.3).

In the remaining six countries¹⁰, content related to paediatrics and child care was only found in the context of other disciplines (Finland, France, Ireland, Malta and Norway) or the curriculum document was not available with the content required (The Netherlands).

Figure 3.3 Overview of the compulsory core modules on children within the curriculum documents provided by the participating countries



¹ Denmark responded after the analysis for this report had been processed and is not included in the analysis.

⁹ Practical hours were not specified in four of the nineteen modules (21.1%). Six modules (60%) showed a greater number of hours dedicated to practical training, and four (40%) had a greater number of hours for theoretical training.

¹⁰ The other five remaining countries to complete the sample ($n = 23$) are the ones that require specialised training for caring for children with CCN in the community.

Table 3.3 Characteristics of the compulsory core modules by country

Country	Title of the module	ECTS	Theoretical hours	Practical hours	Year
Croatia	- Paediatrics	2	30	n/a	2 nd
	- Nursing a child	9	45	90	2 nd
Cyprus	- Child care nursing	6	-	-	3 rd
Estonia	- Healthy child nursing	5	36	8	1 st
	- Internship - A healthy baby	3	6	56	1 st
	- Nursing sick children	5	40	20	3 rd
	- Internship - Children's nursing	6	6	150	3 rd
Finland	Child care only taught in the context of other modules				
France	Child care only taught in the context of other modules				
Greece	- Paediatrics	2	50-60 ^a	n/a	2 nd
Iceland	- Nursing care of children and their families	8	24	50	4 th
	- Paediatrics	4	17.3	n/a	4 th
	- Growth and development of children and teenagers	3	11.9	n/a	2 nd
Ireland	Child care only taught in the context of other modules				
Italy	- Paediatric nursing	2	-	-	2 nd
	- Paediatrics	1	-	-	2 nd
Latvia	- Paediatrics and patient care	1.5	-	-	3 rd
Lithuania	- Children's health, illness and nursing	4	30	15	2 nd
Malta	Child care only taught in the context of other modules				
Netherlands	No curriculum document available with the content required				
Norway	Child care only taught in the context of other modules				
Poland	- Paediatric nursing	16	95	320	1 st , 3 rd
Portugal	- Nursing of children's health and paediatrics	6	63	18	3 rd
Romania	- Childcare and paediatric nursing	4-5 ^b	48	72	3 rd
Spain	- Nursing of children and adolescents	6	-	-	3 rd

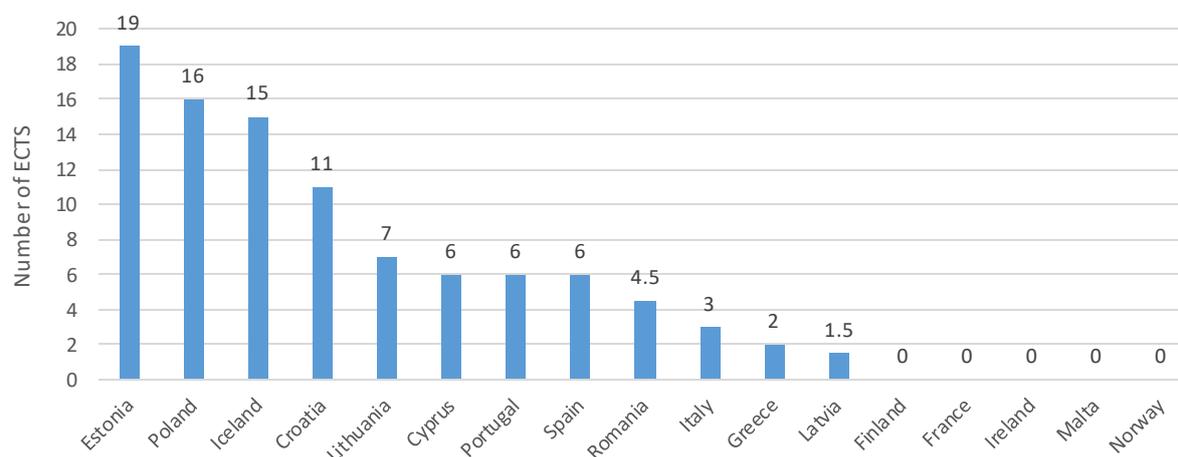
Note: n/a is stated when practical hours are not available in the module. The symbol (-) is stated when differentiation between theoretical and practical was not available either in the whole curriculum or in the specific module.

^a Theoretical training was only stated in ECTS. The researcher calculated the number of theoretical hours for 2 ECTS taking into account that 1 ECTS is between 25 and 30 hours.

^b Workload used in the module was only expressed in hours. The researcher calculated the number of ECTS for 120 hours taking into account that 1 ECTS is between 25 and 30 hours.

A figure to illustrate the number of ECTS on compulsory core modules that are related to child care and paediatrics is shown in Figure 3.4.

Figure 3.4 Total number of ECTS in compulsory core modules that focused on child care and paediatrics



Estonia, Poland, Iceland and Croatia had curriculum documents with the highest number of ECTS in child and paediatric compulsory core modules, followed by Lithuania, Cyprus, Portugal and Spain, with core modules that had more than six ECTS. Romania, Italy, Greece and Latvia had less than six ECTS in their compulsory core modules related to children. The submitted curricula from the remaining five countries had no compulsory core modules that focused on children.

Child care mentioned within the context of other compulsory modules

Childcare was also mentioned within other subjects. Table 3.4 shows the different compulsory modules where the care of the child was mentioned.

In thirteen curriculum documents provided by the participating countries (76.5%), child-related search terms were found in compulsory modules with a focus on the *public health, community and family nursing, health promotion and prevention, and primary care*. Child-related search words were also found within *mental health and psychology* disciplines (64.7%, $n = 11$), in *gynaecological, maternal and children care* (52.9%, $n = 9$), *clinical nursing* (47.1%, $n = 8$), and (35.3%, $n = 6$) within *biomedical science* disciplines. Less than one-fourth included these words within modules with a focus on *other populations* (23.5%, $n = 4$), *legislation / ethical issues* (23.5%, $n = 4$), *growth and development* (17.6%, $n = 3$), *nutrition* (17.6%, $n = 3$) and *pedagogy* (17.6%, $n = 3$). Lower proportions were found in other specialised disciplines such as *surgical nursing* or *internal medicine* (11.8%, $n = 2$; 5.9%, $n = 1$), and other contextual disciplines such as *protection and safety* or *management* (5.9%, $n = 1$) (Table 3.4).

Table 3.4 Other compulsory disciplines¹¹ where child care was mentioned

Disciplines	Countries
Public health, community and family nursing, health promotion and prevention, primary care	Croatia, Cyprus, Estonia, France, Iceland, Italy, Latvia, Lithuania, Norway, Poland, Portugal, Romania, Spain
Mental health and psychology	Cyprus, Estonia, France, Iceland, Italy, Lithuania, Malta, Norway, Poland, Romania, Spain
Gynaecological, maternal and children care	Croatia, Cyprus, Finland, Latvia, Lithuania, Malta, Poland, Portugal, Romania
Clinical nursing	Croatia, Ireland, Italy, Latvia, Lithuania, Norway, Poland, Spain
Biomedical science ^a	Croatia, France, Italy, Latvia, Poland, Portugal
Other populations ^b	Croatia, Ireland, Lithuania, Poland
Legislation / ethics	France, Poland, Romania, Spain
Growth and development	Croatia, Iceland, Portugal
Nutrition	Poland, Romania, Spain
Pedagogy	France, Poland, Romania
Emergency care	Poland, Portugal
Infectious care	Latvia, Poland
Surgical care	Lithuania, Poland
Internal medicine care	Poland
Neurology	Poland
Rehabilitation and physiotherapy	Poland
Management skills	France

^a Medical knowledge disciplines include modules such as anatomy, physiology, genetics, biochemistry, etc.

^b Other populations disciplines include modules such as geriatrics or nursing of adults.

(Continued)

¹¹ The name of each discipline has been assigned by compiling modules of the same area of study from all the curricula provided by the responding countries.

Table 3.4 Other compulsory disciplines where child care was mentioned

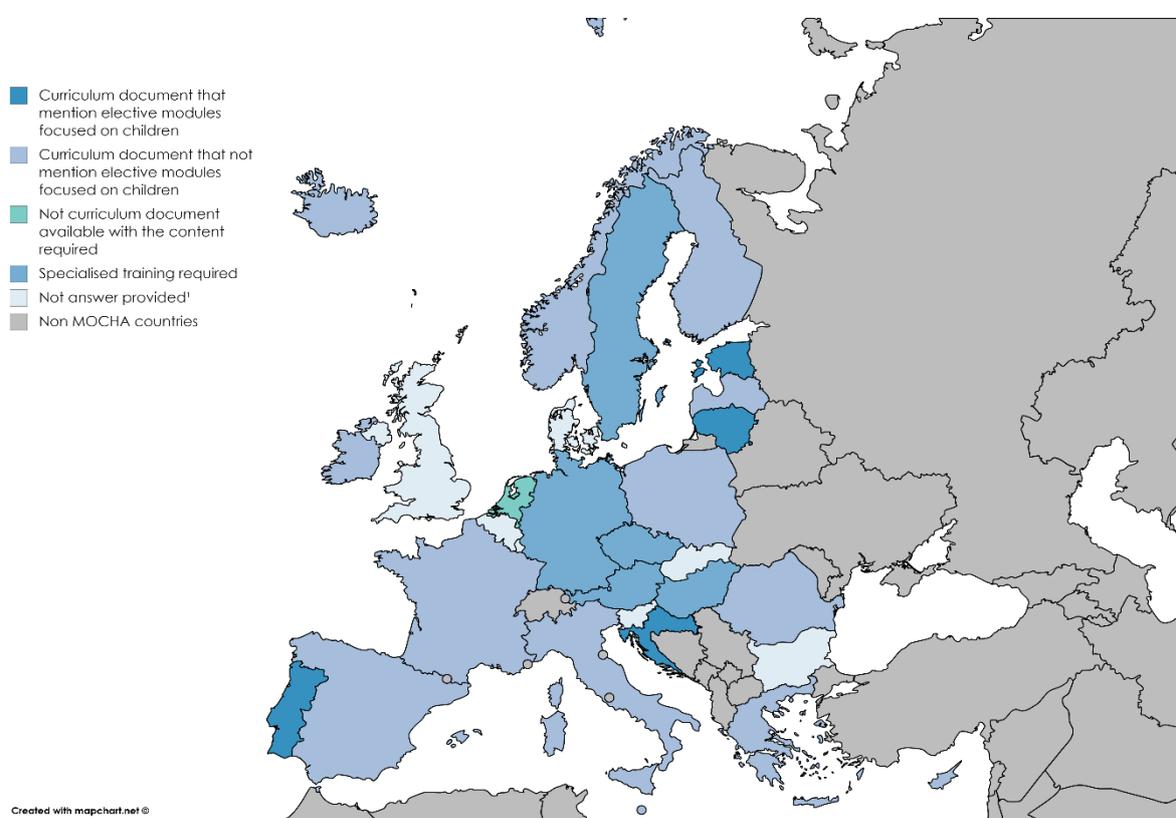
Disciplines	Countries
Relationships	France
Environment and health	Romania
Protection and safety	Romania
Languages ^c	Latvia

^c Languages disciplines include the module English for nursing.

Elective modules

This section describes the characteristics of all the elective modules that focused on the care of the child. These modules were mentioned in less than one-quarter of the curricula (23.5%, $n = 4$) (Figure 3.5). It is interesting to note that countries that reported having child-related elective modules also had compulsory core modules with a focus on children.

Figure 3.5 Overview of the elective modules focused on children within the curriculum documents provided by the participating countries



¹ Denmark responded after the analysis for this report had been processed and is not included in the analysis.

The content of the elective modules varied. Diverse specialised areas on child care such as school nursing, intensive care, mental health or special needs were identified. These modules were usually two or three ECTS, except for Estonia and Portugal who had modules comprising five and eighteen ECTS respectively. The differentiation between hours expended for theoretical and practical training was identified in all the modules analysed across the countries. Nevertheless, practical hours were not specified in four of the eleven modules (36.4%), all coming from the Portuguese curriculum. The elective modules were usually offered in the third or fourth year, except for Lithuania which elective module was imparted in the second year (Table 3.5).

Table 3.5 Characteristics of the elective modules by country

Country	Modules' title	ECTS	Theoretical hours	Practical hours	Year
Croatia	- Nursing care of school children	2	15	15	3 rd
	- Paediatric nursing in intensive care unit	2	15	15	3 rd
Estonia	- In-depth knowledge in children's nursing	5	20	8	4 th
Lithuania	- Socio-cultural work with young people in the community	3	15	15	2 nd
	- Children / adolescents with emotional and behavioural disorders	2	27	n/a	3 rd
Portugal	- Mental health challenges in childhood and adolescence	2	27	n/a	3 rd
	- The child with special needs: diagnosis and intervention in paediatric nursing	3	16	12	4 th
	- Clinical teaching in the optional area of child health nursing	18	4	385	4 th
	- Paediatric nutrition - assessment and nursing intervention	2	27	n/a	3 rd
	- Neonatal nursing	2	27	n/a	3 rd
	- Community nursing intervention in school context	3	16	12	4 th

Note: n/a is stated when practical hours are not available in the module.

Children mentioned within the context of other elective modules

Child care was mentioned in the context of other elective modules (Table 3.6). No more than a quarter of the curricula contained words related to the child in disciplines addressed to *public health, community and family nursing, health promotion and prevention, and primary care* (23.5%, $n = 4$), *rehabilitation* (17.6%, $n = 3$), *emergency care* (17.6%, $n = 3$), *health by gender and sexuality* (17.6%, $n = 3$), and *pain management* (17.6%, $n = 3$). Minor proportions of these search terms were identified in subjects such as *oncological care, anaesthesiology, etc.* (11.8%, $n = 2$; 5.9%, $n = 1$) (Table 3.6).

Table 3.6 Other elective disciplines¹² in which child care was mentioned

Discipline	Countries
Public health, community and family nursing, health promotion and prevention, primary care	Croatia, Greece, Lithuania, Portugal
Rehabilitation and physiotherapy	Croatia, Greece, Lithuania
Emergency care	Lithuania, Malta, Spain
Health by gender and sexuality	Ireland, Portugal, Spain
Pain management	Croatia, Portugal, Spain
Oncological care	Finland, Malta
Transfusion medicine	Croatia
Anaesthesiology	Poland
Obesity	Portugal
Language^a	Portugal
Lifespan health	Ireland
Dietetics	Lithuania
Obstetrical and child care	Greece

^a Languages disciplines include the module Portuguese sing language.

(Continued)

Table 3.6 Other elective disciplines¹³ in which child care was mentioned

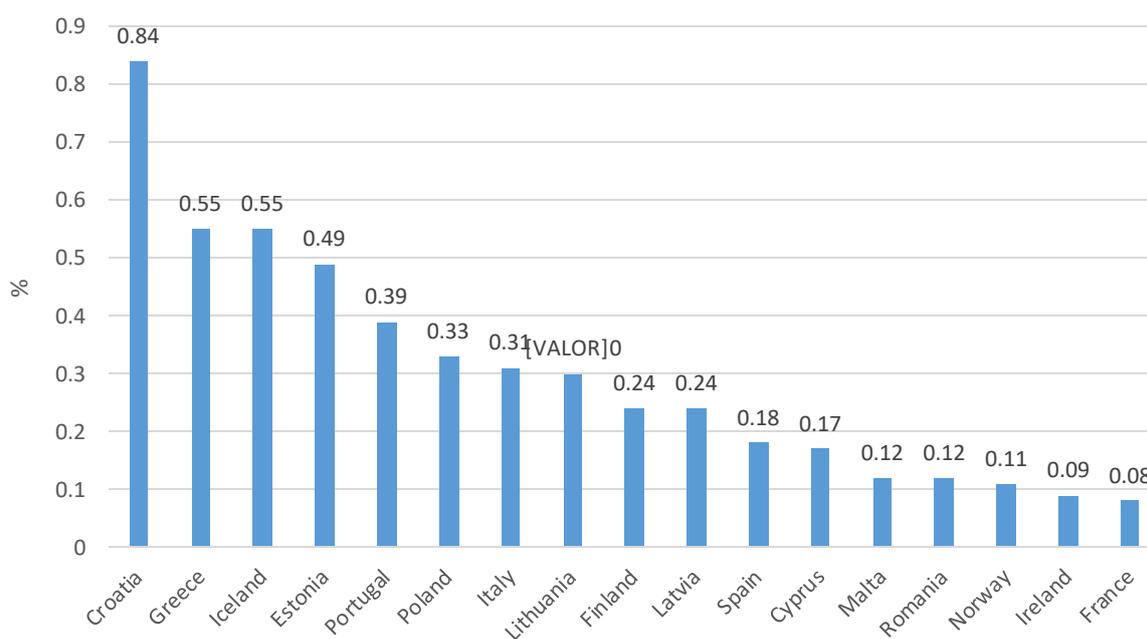
¹² The name of each discipline has been assigned by compiling modules of the same area of study from all the curricula provided by the responding countries.

Discipline	Countries
Nursing in basic health	Finland
Biomedical science	Lithuania
Mental health	Portugal

Quantification of child related search terms in the curricula documents

In order to provide an overview of child-related content in each curriculum, a quantification of child-related search terms (Appendix 4) and comparison with the total number of words in the curriculum documents was conducted. Figure 3.6 shows the results in percentages.

Figure 3.6 Percentage of child related search terms within the whole curricula by country



No curriculum document from the respondent countries presented more than one percent of child-related search terms within the whole curricula. The Croatian curriculum had the majority of search terms. In the documents from Greece and Iceland, the percentages dropped to 0.55%. The percentages on the remaining countries was below 0.50%, lowest in Ireland and France. For more information on the number of child-related search terms and total words count in each curriculum see Appendix 4.

3.2.2 In depth analysis of each curriculum

The inductive content analysis conducted in the curricula documents detected a total number of 1173 keywords related to the care of the child. Twenty-one subcategories and three main categories were identified. The main categories that contained most of the keywords were *Nursing Care of Children* ($n = 622$) and *Paediatrics* ($n = 440$), the category that focused on the *Psychosocial Aspects* had the least number of keywords ($n = 111$) (Table 3.7). A table with the number of keywords for each subcategory by country has been included in Appendix 5.

Table 3.7 Child related content categorisation

¹³ The name of each discipline has been assigned by compiling modules of the same area of study from all the curricula provided by the responding countries.

Subcategory	N	Main category	n
Provision of nursing care	167	Nursing care of children	622
Medical treatment, interventions and procedures	141		
Identification of diseases and nursing diagnosis	79		
Assessment and planning	77		
Prevention and health promotion	60		
Other knowledge and skills to work with children	17		
Ethics and law	17		
Family nursing	15		
Accidents and emergencies	12		
School nursing	12		
Children with complex/special health care needs	9		
Nurses roles	9		
Pain management	7		
Pathologies and injuries	257	Paediatrics	440
Growth and development	109		
Child health specific characteristics	45		
Basic needs	29		
Children's and family experiences	32	Psychosocial aspects	111
Support and preparation	29		
Communication and relationships	27		
Health education and counselling	23		
Total			1173

Note: n = number of keywords

- *Nursing care of children*

This category described the content that focused on the knowledge that nurses need in order to deliver effective nursing care to children. It included nursing processes such as nursing assessment, identification and intervention, the study of specific areas such as pain management, family nursing, and ethics.

Provision of nursing care (n = 167) subcategory incorporated content with a general approach (e.g. effective care provision, paediatric nursing care, etc.), related to specific health conditions (e.g. intestinal infections, respiratory diseases, etc.) and in different child-stages (e.g. newborn, adolescent, etc.). It also comprised provision of care for the child undergoing surgery and for the healthy child. In *medical treatment, interventions and procedures* (n = 141), content was addressed to providing knowledge on major interventions, treatments and procedures for some of the most frequent pathological conditions in children. *Identification of diseases and nursing diagnosis* (n = 79) contained keywords related to the recognition of deviation in children's health along with the use of appropriate tools and methods for detection. *Assessment and planning* (n = 77) covered both, the evaluation of the child, and the assessment of nursing care, including necessary tools. Development of a nursing care plan was also part of this subcategory. *Prevention and health promotion* (n = 60) included all content related to vaccinations, prevention of specific problems and diseases, prevention of further complications and risk factors affecting the child. The promotion of healthy development and principles for promoting health were also incorporated. *Other knowledge and skills required to work with children* (n = 17) covered areas such as safety and organisational regulations, the child in his / her context, knowledge on specific units such as intensive care or outpatient clinics, research methods, and several skills like calculation or critical thinking. *Ethics and law* (n = 17) incorporated those keywords focused on broad ethical and legal aspects of childhood, children's rights, and the

respect for them and their parents. *Family nursing* ($n = 15$) encompassed the family-centred care approach, support to the family, family roles on the child's health, and the skills development to work effectively with their families. *Accidents and emergencies* ($n = 12$) covered areas related to childhood emergencies, including Basic Paediatric Life Support, and factors encouraging accidents on the child. *School nursing* ($n = 12$) embraced several themes, such as health education and promotion, epidemiological risks, or health in school settings. *Child with complex / special health care needs* ($n = 9$) introduced keywords related to the child with life-threatening conditions, chronic and malignant diseases, disabilities, and the child with special needs. *Nurses roles* ($n = 9$) content was addressed to provide knowledge on the functions that nurses have related to the care of the child and family, on specific situations (e.g. in the admission to the hospital or in the community), and on specific illnesses (e.g. mental health disorders). *Pain management* ($n = 7$) contained keywords related to the pain concept and the use of tools for its measurement and regulation.

- *Paediatrics*

This category included stages of growth and development, pathologies and injuries, basic needs, and issues related specifically to children.

Pathologies and injuries ($n = 257$) was the subcategory with the highest number of keywords related to the child. The content was related to common child health problems (e.g. children's pathologies of all body systems, childhood pathologies, etc.), and related to specific systems (e.g. Diabetes Mellitus, respiratory diseases, etc.). Child psychopathologies were included in this subcategory. *Growth and development* ($n = 109$) incorporated content focus on the normal development of the child, deviations and factors affecting growth. *Child health specific characteristics* ($n = 45$) included particular features in several areas (e.g. anatomical characteristics, body structural characteristics, etc.), and the differences to the adult patient. *Basic needs* ($n = 29$) incorporated keywords focused on children's nutrition and sleep.

- *Psychosocial aspects*

This category described the knowledge available in the curricula related to psychosocial aspects. It included children's and family experiences, support and preparation, communication and relationships, as well as health education and counselling.

Children's and family experiences ($n = 32$) related to issues such as illness or hospitalisation. *Support and preparation* ($n = 29$) included content that focused on the provision of both psychological and physical support to children and families for specific aspects like clinical examinations, performing procedures, etc. *Communication and relationships* ($n = 27$) covered both, areas focused on the skills required for an effective communicative process (e.g. communication strategies, methods or evaluation), and areas addressed to the effective establishment of relationships (e.g. children-parent interaction, relationships with children and parents, etc.). *Health education and counselling* ($n = 23$) contained keywords related to the process of teaching and advising children and families, its methodology, and evaluation.

4.0 Discussion and Conclusion

4.1 Introduction

This section discusses the main themes emerging from this study, providing key points at the end of each theme. It also includes the limitations that the study and the research team had to face and the conclusion reached.

4.2 Key themes emerging from this work

From the data analysed in this study (nursing qualifications and general nursing curricula), three main themes have been identified as important for enhancing nursing preparedness when delivering care to children with CCN in the community: *the need for specialised knowledge, need for standardisation and importance of focus of psychosocial aspects.*

4.2.1 The need for specialised knowledge

The results of this study show that for the majority of European countries, a general nursing qualification is all that is required to work with children with CCN in the community. According to the PNAE, children are entitled to be cared for by nursing staff who are adequately prepared and qualified. Thus, given that specific learning regarding child health may be tacit rather than explicit in general nurse education programmes, they are potentially insufficient in preparing nurses to perform their roles on infants, children and young people (Paediatric Nursing Association of Europe, 2015).

The need for further education for nurses caring for children with CCN has been manifested in the literature (Carver and Sloper, 2004, Fletcher et al., 2011, Pearson, 2013, Summers, 2013, Europe, 2015). In a study performed by Pearson (2013) focusing on palliative nursing care for children, general nursing education was deemed insufficient to provide the specific skills and knowledge that this type of care required. The need for acquiring skills and knowledge through postgraduate programmes was highlighted (Pearson, 2013). Other studies also concur that specific training is essential for nurses to feel prepared for delivering care to children, as a lack of appropriate training can lead to a lack of nurses' confidence (McCloskey and Taggart, 2010, Neilson et al., 2010, Pearson, 2013). Inadequately met educational needs from health professionals was also detected as being one of the main causes for limited engagement with children and young people (Carver and Sloper, 2004, Fletcher et al., 2011). Summers (2013) affirmed that educational programmes have the duty to prepare children's nurses so that they can respond effectively to the needs of children and young people.

Reports in other WP2 tasks also emphasise the importance of specialised care. Having paediatric expertise was noted as being an important factor in appropriate referrals from primary to secondary paediatric care. Additionally, early contact with health professionals with specific education and experience in paediatrics, increases the probability of detecting tumours before they become symptomatic (Wolfe, Lignou and Satherley, 2017). Having access to specialist care and improving education of nursing and other health professionals was considered as optimal to the integration of care for children with LTV and intractable epilepsy (Brenner et al., 2017). Moreover, young people (16-24 years), although satisfied with health care, consistently report poorer experience of care than older adults and are significantly less likely than adults to feel respected or have necessary confidence and trust in their doctors (Alma et al., 2017).

However, even though the growing body of evidence would suggest that specialist training is of vital importance in providing care for children with CCN, five of the respondent countries expressed that they have no paediatric options available for further or enhanced graduate nurse education.

Key Point

- The need to promote specialist children's nurse education in order to enhance the skills and competence of nurses who deliver care to children living with CCN.

4.2.2 Need for standardisation

Findings in this study showed wide variation across European countries in general nursing qualifications. One issue detected was the variation in number of years training. The Professional Qualifications Directive 2005/36/EC amended by the Directive 2013/55/EU, states that a general nursing degree should consist of at least three years of study. As seen in the results, duration varied between three and four years of study. The difference may depend on the ECTS weighting of the course. In some countries, the variation could be related to the level of education (diploma or bachelor degree) available for nurses. In a study carried out by Praxmarer-Fernandes et al. (2017) on current levels of nursing and midwifery education, wide variations were identified across the European Region, finding that half of the sample (EU or European Free Trade Agreement (EFTA) countries) offered nursing education at both, diploma and bachelor's degree level. However, a bachelor's degree in nursing has been related to better health outcomes, decreasing the rates of patient mortality in hospital settings (Aiken et al., 2014, Praxmarer-Fernandes et al., 2017).

Other main issues identified from the analysis of the general nursing curricula was the wide variation in the focus on children within the curricula. The results showed that child care and paediatrics is addressed within the context of other non-childcare focused modules. Only twelve out of seventeen countries had compulsory core modules on children. It is interesting to note that elective modules focused on children were only available in those countries with one or more compulsory core modules on children.

Article 31 of The Professional Qualifications EU Directive 2005/36/EC amended by the Directive 2013/55/EU, regulates the undergraduate training of nurses responsible for general care (European Parliament and Council Directive, 2005, 2013). As mentioned in the introduction, this Directive gives a general description of the training and competences required for a general nurse. However, it does not give guidance on the specific content and skills that are necessary for each of the areas that it mentions, including the nursing care of children. The implications of this broad directive are visible in the results of this study. The results show the wide variation in the different countries. The countries have adopted and implemented the directive based on their interpretations of what the standard should be.

An integrative review of the literature for this study (March 2016 - February 2017) reveals no current European competence framework for how the nursing care of children should be taught or what the content should be for general nursing programmes. Despite the fact that children comprise a significant part of patient populations in primary care. Wolfe and McKee (2013) in the DIPEX report notes that children in England make up 25% of a typical primary care population, and are associated with 40% of the workload (Alma et al., 2017).

In this study, the content related to the child within general nursing programmes was identified. Three themes were detected: *nursing care of children*, *paediatrics* and *psychosocial aspects*. *Nursing care of children* and *paediatrics* held the greatest number of keywords related to children in the documents analysed. The lack of a European competency framework makes it difficult to regulate which specific knowledge and skills should be endorsed and fostered to ensure the highest possible quality care for children. This would hold even greater importance

in the context of the children with CCN, where this care has to be targeted to the child's specific health condition. In the curricula analysed, very little content focus on children with CCN was identified. A possible explanation for this is that there is no common definition for children with CCN across countries. This could be the reason it is difficult to find reference to these children in the curriculum documents. Elements of children with CCN appeared mainly in modules that focused on the specifics of physiological illnesses, with reference to their care, treatment, aetiology, etc. This concurs with the view of Whitehead (2007) who expressed the long continuing tradition of nursing curricula, as being grounded within a disease-focused paradigm (Whitehead, 2007). Such an approach impedes a deeper understanding of complexity, since study of the specific characteristics of these illnesses, mitigates against the 'bigger picture' of the social and political determinants of health, with impact negatively on the care of the child with complex need.

Key points

- These considerations demonstrate the need for standardisation, of principal aspects of general nursing education such as the level of education, ECTS per course and the number of years training across European countries.
- The importance of creating a European competency framework for regulating the nursing care of children within general nursing programmes, regarding content and number of hours for theoretical and clinical instruction. A common framework will need to take into consideration the variability of health system across countries.
- Within a European competency framework, it is important to dedicate learning modules to the care of the child. This is particularly important for children with CCN, so that focus on these children and their families will not get lost in the wider curricula.

4.2.3 Importance of focus on psychosocial aspects

Results in this study showed that a large proportion of curricula content is devoted to biomedical knowledge such as *pathologies and injuries* or *medical treatment, interventions and procedures*. Although it is not possible to interpret that larger amounts of time are dedicated to biomedical knowledge, it can give an idea of how the content is distributed and how the subjects are presented in the curriculum. A possible explanation for this could be the long tradition of targeting nursing curricula within a disease-focused paradigm (Sjolin et al., 2014, Whitehead, 2007).

In contrast, psychosocial aspects related to child health were less visible in the curricula documents. In particular, few keywords were found in psychosocial aspects linked to children's and family experiences, communication, creating trusting relationships, counselling, support, and health education.

In the study carried out by the DIPEX group in this WP, children with several health conditions and their parents were asked: What makes a good health professional? Communication and relationships with health professionals were considered key elements (Ahuja and Williams, 2010, Alma et al., 2017, Curtis et al., 2004, Freake et al., 2007, Robinson, 2010, Schaeuble et al., 2010, Schalkers et al., 2014). Children and families reported the need for improvement on these

issues. According to the DIPEX study on the recommendations raised by the participants for solving problems experienced with health professionals, “*avoid jargon, show interest on the feelings and life impact of the health condition, explaining to the child, giving information adjusted to the age, listen and facilitate open reassuring communication*” will help to improve communication skills (Alma et al., 2017). These skills were very much appreciated in difficult situations, such as “*when doing tests or uncomfortable explorations*” or “*when asking sensitive questions*” (Alma et al., 2017). As suggested by Griffin et al. (2004), an improved communication between health professional and patients will lead to better outcomes (Griffin et al., 2004, Alma et al., 2017). Moreover, one patient suggested being considered an equal partner in relationships between health professionals and patients, as this enhanced confidence and helped the patients to share their thought (Alma et al., 2017).

The importance of communication and relationships were also highlighted in other tasks in the WP. One of the findings in the management of care of children on LTV and with TBI was that there was: “*limited support for the provision of linguistically appropriate or culturally appropriate information*”. Furthermore, “*good personal and professional relationships*” was considered as optimal to the integration of care on children with IE (Brenner et al., 2017).

Other elements found as important for families in the DIPEX group and in other tasks of this WP was the need for health education and support. Parents need more information not only on the diseases of their children, but also on economic support; support for siblings; counselling for families; education, skills and strategies to cope with the child’s disease; support for the child to have peer relationships; and services, associations or courses linked with the child health condition (Alma et al., 2017, Brenner et al., 2017, Keilthy et al., 2017).

Importance of the psychosocial aspects is also visible in the literature, where children and families see a partnership with nurses and her/his personal attributes as key characteristics for performing high-quality nursing care. Essential for creating partnership with children and families is the establishment of trusting relationships, where the nurse advocates on behalf of the family, respect their beliefs and values and communicates in an effective way. Personal attributes such as being friendly, empathetic, kind, supportive and with a sense of humour are key elements for enhancing the relationships with the child and family (Fletcher et al., 2011, Hale et al., 2008, Pearson, 2013, Summers, 2013).

In summary, the importance of a psychosocial focus is highlighted strongly by children and their families when describing important characteristics in nurses caring them. However, this focus is barely visible in the sample of general nursing curricula included in this study. Nurse education should prepare nurses so that they can play an important role in promoting trust and alleviating unnecessary suffering in these families. While it is true that nurses need to have appropriate biomedical training in the care of the child, and in particular children with CCN; there is a need for nurses to develop communication and relational skills and personal attributes as highlighted by parents and children. The research team acknowledges that if nurses do receive appropriate training in these areas, it was not manifest in the curricula content that were analysed in this study.

Key points

- It is necessary to focus more specifically on psychosocial aspects related to the care of children and their families in general nursing curriculum documents.

- The lack of emphasis on these aspects highlight the need for the inclusion of children and families when developing educational programmes. This will provide direction for nursing skills and training necessary for the care of the child.

4.3 Limitations

The study has limitations. The questionnaire was sent to CAs who had the responsibility of obtaining the required data from nursing experts in their countries. The validity of the responses was dependent on the agents' and respondents' interpretation of the questions. Subtle differences in the meaning of words can create problems in interpreting survey questions (Squires et al., 2013). English is not the native language of many of the respondents. This can also lead to possible misunderstandings. The strength of the research findings must be evaluated in relation to the procedures used to generate the findings (Graneheim and Lundman, 2004). The questions went through a process of validation before the questionnaire was sent. In order to ensure the reliability of the researchers' interpretation, the responses were sent back to the CAs for validation. Issues related to language can influence the validity of the results. The responses from nine countries were in their native language and translated by the team using a translation tool. The members of the research team are proficient in a number of languages and uncertainties related to the meaning of words and sentences were discussed until clarity was attained. Native speakers and experts in the field were also consulted.

The analysed curricula were from institutions who educated the largest number of student nurses in the respondent countries. Content analysis reveals the content of the documents analysed. It does not provide information on how the content is interpreted and used in practice. A text can have numerous meanings and there are always elements of interpretation when deciphering a text (Graneheim and Lundman, 2004). The intention is to explore usage, not to assume meaning. It is essential to take this into account when considering the trustworthiness of the findings. A team of three researchers were involved in process of identifying the keywords and categorising the content. This adds credibility to the analysis process.

The study is descriptive in nature and only the manifest content of terms related to child care is presented. Fairclough (2010) maintains that the articulation of knowledge by the use of certain terms and the absence of others can be indicative of specific discursive strategies (Fairclough, 2010). Describing something in a certain way can ensure the relevance of certain topics and render other topics irrelevant or unimportant (Jørgensen and Phillips, 2006).

Initially, it was planned to study paediatric nursing curricula from countries that required specialised training to deliver care to children with CCN in the community. The small number of countries requiring specialised training along with the even smaller number of specialised curriculum documents ($n = 2$) presented for analysis made this plan redundant. In the same way, the data gathered for the number of nurses that complete paediatric nurse education each year was not consistent across countries, making difficult the analysis and posterior comparison. For that reason, this analysis was rejected.

A further limitation is that not all countries responded and we are missing data from Belgium, Denmark¹⁴, Luxembourg, Slovakia, Slovenia and the United Kingdom. The responses, however, provide a descriptive analysis from 23 countries. The data was collected in 2016-2017. Due to educational reforms, the results of education surveys will need to be monitored for continued relevance in the future (Praxmarer-Fernandes et al., 2017). The study does, however, give a descriptive overview of nursing qualifications required to look after children with CCN in the community, and the curricula content related to children and paediatrics in 2016-2017 in 23 European countries.

4.4 Conclusion

Benner et al. (2010) called out for a radical transformation of nurse education at national levels in order to meet today's CCN (Benner et al., 2010, Benner, 2012). This section of the MOCHA project has investigated nurses' preparedness for practice in relation to the nursing care of children in the community, and in particular children with CCN. Existing educational requirements have been mapped and the content of nursing curricula has been studied. The report gives us a better understanding of nursing training in Europe and the opportunity to suggest how to improve education for nurses in order to meet the needs of children and their families. A general nursing degree is all that is required in most countries. Great variations have been detected across countries in the emphasis placed on the child in general nursing programmes. There is no uniform mandatory system to ensure clinical nursing competence (Bradshaw and Merriman, 2008) and without such a system, it is difficult to confirm that nurses are prepared sufficiently to meet the requirements of a child with complex needs. Although a paediatric specialisation would be the ideal training for caring for children with CCN, the reality is that political and social conditions across Europe can be a hindrance to this goal.

There is, however, a need for European standards in order to agree on content and focus dedicated to children inside general nursing programmes. These standards should incorporate the holistic care of the child. The results of this study have clinical and theoretical implications. There is a need to investigate further discourses in curricula documents and to carry out qualitative studies on how to care for children with CCN with a number of stakeholders (nurses, student nurses, parents, children and members of national bodies involved in regulating nursing education). Children and parents should be involved at all levels when considering the creation of new standards for practice.

¹⁴ Denmark responded after the analysis for this report had been processed and is not included in the analysis.

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Appendices

Appendix 1: Country Agent questionnaire



Models of Child Health Appraised

(A Study of Primary Healthcare in 30 European countries)

Please state your country here

WP2: Safe and Efficient Interfaces of Models of Primary Health Care with Secondary, Social and Complex Care

Task 4: Nursing and Skills

Across Europe, nursing roles in public health (also referred to as community health) nursing are diverse, demonstrating a variety of models of health care delivery to children. The specific contribution, skills and training necessary to develop these roles is often poorly defined. A better understanding of the curricula at nursing schools will contribute to the appropriate development of theoretical and practical/clinical skills and competence that will assist in the better performance of these roles and in consequence, the improvement of health care delivery to children and their families.

We are interested in the care of children with a range of issues including those with complex clinical care needs (see definition in Appendix 2). The purpose of this task is to examine the curriculum documents of undergraduate and postgraduate nursing programmes in order to find out more about nurses' preparation for these groups of children. This will also allow other work packages to analyse the curricula for training in well child care, minor illness and mental health.

Article 31 of EU Directive 2005/36/EC regulates the undergraduate training of nurses responsible for general care (European Parliament and Council Directive, 2005). It specifies that general nurse training shall consist of theoretical and clinical instruction, including "child care and paediatrics", either as specific area of focus or integrated in other subjects. Specialist/postgraduate nurse training is not standardised at EU level.

This regulation provides a general framework for nursing curricula across Europe, but it does not address differences within countries. However, surveys and reports carried out by organizations such as the European Observatory or the Paediatric Nursing Associations of Europe (PNAE), portray a specific picture of the nurse's training. In particular, surveys performed by PNAE contribute to identify different options that nurses have across countries to obtain paediatric nursing education, but they do not focus on the training that nurses receive to deliver care to children with complex health care needs in the community.

For that reason, we would really appreciate if you could provide us with the information required below in order to better understand how the preparation of these nurses is in your country. We have included the paediatric nurse education provided by the PNAE and the European Observatory (Appendix 1) and a glossary of terms (Appendix 2) to help you understand the scope of the topic we are investigating.

Please send your responses to Denise Alexander by **2nd September 2016**.

Thank you for your collaboration

Professor Anne Clancy – UiT, The Norwegian University of the Arctic

Professor Philip J Larkin – University College Dublin

Research Assistant Elena Montañana Olaso – University College Dublin

Section A

The aim of this section is to explore the curriculum documents of undergraduate and postgraduate nursing programmes. We would like information on the level of preparation that nurses need in order to care for children with complex health care needs in the community.

To achieve this purpose we need to access the English version of relevant curriculum documents from your country. There are two ways that you can provide them: a) a link to the specified documents listed below or b) attach a file (in PDF format) with the required documents. If you can't get the English version, provide us with the document in the language of your country. You will find an example of the type of document we wish to access at the end of section B (*).

1. General Nurse training

- 1.1. Please, identify the university department or nursing school with the largest number of nursing graduates per year in your country and provide us with their general nursing curriculum document. If you feel that other general nursing curricula are more representative, please send us a link to the document or a PDF. Please comment in the box provided why this curriculum is more representative.

Click here to enter text.

- 1.2. Also add if the curriculum is from a public or a private university/college/high education centre. Please, tick the appropriate box.

Public Private

2. Paediatric Nurse training

Based on reports from the European Observatory and the survey carried out by the PNAE we have provided a document (Appendix 1) which includes a summary of the key findings for paediatric nursing education.

- 2.1. Could you confirm that the information quoted in Appendix 1 is correct and updated for your country?

Yes No

Please add your corrections, comments and specifications (if any) in the box below:

Click here to enter text.

2.2. Please, provide us with a PDF or a link to the curriculum documents for the paediatric nursing education as stated in Appendix 1 for both undergraduate and postgraduate courses.

2.3. Also add if the curriculum is from a public or a private university/college/high education centre. Please, tick the appropriate box.

Public Private

2.4. Approximately, how many nurses who have completed paediatric nurse education qualify each year, these might be postgraduate, diploma courses or other courses (please specify)?

[Click here to enter text.](#)

Section B

The purpose of this section is to gain information on the qualifications that nurses working with children with complex health care needs have in your country.

Please, answer the following question.

In your country, can nurses with a general nursing qualification look after children with complex health care needs in the community?

Yes No

If no, what undergraduate and/or postgraduate/specialized qualification do they need in order to work with children with complex health care needs?

Please, specify in the box below:

Click here to enter text.

Is this undergraduate and/or postgraduate/specialized qualification compulsory?

Yes No

Please provide us with a PDF or link to the English version of this curriculum document. If you can't get the English version, provide us with the document in the language of your country:

Click here to enter text.

* Here you have an example of the detail required of the nursing curriculum document we wish to access:

<http://nursing-midwifery.tcd.ie/undergraduate/pre-registration/udergrad-bsc-cur-modules.php>

Notice that in this example when you click on each subject a PDF is opened with the specifications of that particular subject. Please, as far as possible, provide us with a document with similar content and characteristics. If you do not have a document with this level of detail, please provide us with the document that you have.

Section C

General comments

Do you have any additional comments you would like to make?

Click here to enter text.

- Please provide the names and contact details of all those who provided feedback, so that we may acknowledge their contribution in our final report

Click here to enter text.

Paediatric nurse education across Europe

Country	Educational pathways to get paediatric nursing training	Sources
Austria	Undergraduate training for paediatric nursing (3 years). OR Undergraduate training for general nurse (3 years) + Postgraduate/specialized training in paediatric nursing (1 year).	PNAE, 2011 https://www2.rcn.org.uk/_data/assets/pdf_file/0018/434511/Findings Paediatric Nurse Education across Europe 2010f.pdf European Observatory, 2013 http://www.euro.who.int/_data/assets/pdf_file/0017/233414/HiT-Austria.pdf?ua=1
Belgium	Undergraduate training for general nurse (3 years) + Postgraduate/specialized training in paediatric nursing (1 year).	PNAE, 2011 https://www2.rcn.org.uk/_data/assets/pdf_file/0018/434511/Findings Paediatric Nurse Education across Europe 2010f.pdf European Observatory, 2010 http://www.euro.who.int/_data/assets/pdf_file/0014/120425/E94245.PDF?ua=1
Bulgaria	Undergraduate training for general nurse (4 years). Postgraduate/specialized training not specified. Please, specify in question 2.1. if there is postgraduate/specialized training in paediatric nursing and its duration.	European Observatory, 2012 http://www.euro.who.int/_data/assets/pdf_file/0006/169314/E96624.pdf?ua=1
Croatia	Undergraduate training for general nurse (3 years) + Postgraduate/specialized training in paediatric nursing (1 year).	PNAE, 2011 https://www2.rcn.org.uk/_data/assets/pdf_file/0018/434511/Findings Paediatric Nurse Education across Europe 2010f.pdf European Observatory, 2014 http://www.euro.who.int/_data/assets/pdf_file/0020/252533/HiT-Croatia.pdf?ua=1
Cyprus	Undergraduate training for general nurse. Please, specify in	PNAE, 2011 https://www2.rcn.org.uk/_data/assets/pdf_file/0018/434511/Findings Paediatric Nurse Education across Europe 2010f.pdf

	question 2.1. duration of undergraduate training. Not postgraduate/specialized training in paediatric nursing.	European Observatory, 2012 http://www.euro.who.int/_data/assets/pdf_file/0017/174041/Health-Systems-in-Transition_Cyprus_Health-system-review.pdf?ua=1
Czech Republic	Undergraduate training for general nurse (3 years) + Postgraduate/specialized training in paediatric nursing (3 years as part-time studies).	PNAE, 2011 https://www2.rcn.org.uk/_data/assets/pdf_file/0018/434511/Findings_Paediatric_Nurse_Education_across_Europe_2010f.pdf European Observatory, 2015 http://www.euro.who.int/_data/assets/pdf_file/0005/280706/Czech-HiT.pdf?ua=1
Denmark	Undergraduate training for general nurse (3.5 years). Not postgraduate/specialized training in paediatric nursing.	PNAE, 2011 https://www2.rcn.org.uk/_data/assets/pdf_file/0018/434511/Findings_Paediatric_Nurse_Education_across_Europe_2010f.pdf European Observatory, 2012 http://www.euro.who.int/_data/assets/pdf_file/0004/160519/e96442.pdf?ua=1
Estonia	Undergraduate training for general nurse (3.5 years) + Postgraduate/specialized training in clinical nursing that provides the paediatric nursing specialization (1.600 hours).	PNAE, 2011 https://www2.rcn.org.uk/_data/assets/pdf_file/0018/434511/Findings_Paediatric_Nurse_Education_across_Europe_2010f.pdf European Observatory, 2013 http://www.euro.who.int/_data/assets/pdf_file/0018/231516/HiT-Estonia.pdf?ua=1
Finland	Undergraduate training for general nurse (210 ECTs from which 30 ECTs are for paediatric nursing). Not postgraduate/specialized training in paediatric nursing.	PNAE, 2011 https://www2.rcn.org.uk/_data/assets/pdf_file/0018/434511/Findings_Paediatric_Nurse_Education_across_Europe_2010f.pdf European Observatory, 2008 http://www.euro.who.int/_data/assets/pdf_file/0007/80692/E91937.pdf?ua=1
France	Undergraduate training for general nurse (3 years) + Postgraduate/specialized training in paediatric nursing (1	PNAE, 2011 https://www2.rcn.org.uk/_data/assets/pdf_file/0018/434511/Findings_Paediatric_Nurse_Education_across_Europe_2010f.pdf

	year).	European Observatory, 2008 http://www.euro.who.int/data/assets/pdf_file/0011/297938/France-HiT.pdf?ua=1
Germany	Undergraduate training for paediatric nursing (3 years). OR Undergraduate training for general nurse (3 years) + Postgraduate/specialized training in paediatric nursing. Please, specify in question 2.1. duration of postgraduate/ specialized training.	PNAE, 2011 https://www2.rcn.org.uk/data/assets/pdf_file/0018/434511/Findings Paediatric Nurse Education across Europe 2010f.pdf European Observatory, 2014 http://www.euro.who.int/data/assets/pdf_file/0008/255932/HiT-Germany.pdf?ua=1
Greece	Undergraduate training for general nurse (4 years) + Postgraduate/specialized training in paediatric nursing (1 year).	PNAE, 2011 https://www2.rcn.org.uk/data/assets/pdf_file/0018/434511/Findings Paediatric Nurse Education across Europe 2010f.pdf European Observatory, 2010 http://www.euro.who.int/data/assets/pdf_file/0004/130729/e94660.pdf?ua=1
Hungary	Undergraduate training for general nurse (3 years) + Postgraduate/specialized training in paediatric nursing. Please, specify in question 2.1. duration of postgraduate/ specialized training.	PNAE, 2011 https://www2.rcn.org.uk/data/assets/pdf_file/0018/434511/Findings Paediatric Nurse Education across Europe 2010f.pdf European Observatory, 2011 http://www.euro.who.int/data/assets/pdf_file/0019/155044/e96034.pdf?ua=1
Iceland	Undergraduate training for general nurse (4 years from which 18 ECTs are for children's nursing and development). Postgraduate/specialized training not specified. Please, specify in question 2.1. if there is postgraduate/specialized	PNAE, 2011 https://www2.rcn.org.uk/data/assets/pdf_file/0018/434511/Findings Paediatric Nurse Education across Europe 2010f.pdf European Observatory, 2014

	training in paediatric nursing and its duration.	http://www.euro.who.int/data/assets/pdf_file/0018/271017/Iceland-HiT-web.pdf?ua=1
Ireland	Undergraduate training for paediatric nursing integrated with general nursing (4.5 years). OR Undergraduate training for general nurse (4 years) + Postgraduate/specialized training in paediatric nursing (1 year).	PNAE, 2011 https://www2.rcn.org.uk/data/assets/pdf_file/0018/434511/Findings Paediatric Nurse Education across Europe 2010f.pdf European Observatory, 2009 http://www.euro.who.int/data/assets/pdf_file/0004/85306/E92928.pdf?ua=1
Italy	Undergraduate training for paediatric nursing (3 years). OR Undergraduate training for general nurse (3 years) + Postgraduate/specialized training in paediatric nursing (1 or 2 years).	PNAE, 2011 https://www2.rcn.org.uk/data/assets/pdf_file/0018/434511/Findings Paediatric Nurse Education across Europe 2010f.pdf European Observatory, 2014 http://www.euro.who.int/data/assets/pdf_file/0003/263253/HiT-Italy.pdf?ua=1
Latvia	Undergraduate training for general nurse (4 years). Postgraduate/specialized training not specified. Please, specify in question 2.1. if there is postgraduate/specialized training in paediatric nursing and its duration.	European Observatory, 2012 http://www.euro.who.int/data/assets/pdf_file/0006/186072/e96822.pdf?ua=1
Lithuania	Undergraduate training for general nurse (4 years). Postgraduate/specialized training not specified. Please, specify in question 2.1. if there is postgraduate/specialized training in paediatric nursing and its duration.	European Observatory, 2013 http://www.euro.who.int/data/assets/pdf_file/0016/192130/HiT-Lithuania.pdf?ua=1
Luxembourg	Undergraduate training for general nurse (3 years) + Postgraduate/specialized training in paediatric nursing (2	PNAE, 2011 https://www2.rcn.org.uk/data/assets/pdf_file/0018/434511/Findings Paediatric Nurse Education across Europe 2010f.pdf European Observatory, 2015 http://www.euro.who.int/data/assets/pdf_file/0006/287943/

	years).	Mini-HiT Luxembourg-rev1.pdf?ua=1
Malta	Undergraduate training for general nurse. Please, specify in question 2.1. duration of undergraduate training. Not postgraduate/specialized training in paediatric nursing.	PNAE, 2011 https://www2.rcn.org.uk/_data/assets/pdf_file/0018/434511/Findings Paediatric Nurse Education across Europe 2010f.pdf European Observatory, 2014 http://www.euro.who.int/_data/assets/pdf_file/0010/241849/HiT-Malta.pdf?ua=1
Netherlands	Undergraduate training for general nurse (4 years) + Postgraduate/specialized training in paediatric nursing. Please, specify in question 2.1. duration of postgraduate/specialized training.	PNAE, 2011 https://www2.rcn.org.uk/_data/assets/pdf_file/0018/434511/Findings Paediatric Nurse Education across Europe 2010f.pdf European Observatory, 2010 http://www.euro.who.int/_data/assets/pdf_file/0008/85391/E93667.pdf?ua=1
Norway	Undergraduate training for general nurse (3 years) + Postgraduate/specialized training in paediatric nursing (1.5 years).	PNAE, 2011 https://www2.rcn.org.uk/_data/assets/pdf_file/0018/434511/Findings Paediatric Nurse Education across Europe 2010f.pdf European Observatory, 2013 http://www.euro.who.int/_data/assets/pdf_file/0018/237204/HiT-Norway.pdf?ua=1
Poland	Undergraduate training for general nurse + Postgraduate/specialized training in paediatric nursing. Please, specify in question 2.1. duration of undergraduate and postgraduate/specialized training.	PNAE, 2011 https://www2.rcn.org.uk/_data/assets/pdf_file/0018/434511/Findings Paediatric Nurse Education across Europe 2010f.pdf European Observatory, 2011 http://www.euro.who.int/_data/assets/pdf_file/0018/163053/e96443.pdf?ua=1
Portugal	Undergraduate training for general nurse (4 years) + Postgraduate/specialized training in paediatric nursing (22	PNAE, 2011 https://www2.rcn.org.uk/_data/assets/pdf_file/0018/434511/Findings Paediatric Nurse Education across Europe 2010f.pdf European Observatory, 2011

	months after 2 years' clinical experience).	http://www.euro.who.int/_data/assets/pdf_file/0019/150463/e95712.pdf?ua=1
Romania	Undergraduate training for general nurse (3 years). Not postgraduate/specialized training in paediatric nursing.	PNAE, 2011 https://www2.rcn.org.uk/_data/assets/pdf_file/0018/434511/Findings Paediatric Nurse Education across Europe 2010f.pdf European Observatory, 2008 http://www.euro.who.int/_data/assets/pdf_file/0008/95165/E91689.pdf?ua=1
Slovakia	Undergraduate training for general nurse (3-4 years) + Postgraduate/specialized training in paediatric nursing (1 year after 2 years of practice).	PNAE, 2011 https://www2.rcn.org.uk/_data/assets/pdf_file/0018/434511/Findings Paediatric Nurse Education across Europe 2010f.pdf European Observatory, 2011 http://www.euro.who.int/_data/assets/pdf_file/0004/140593/e94972.pdf?ua=1
Slovenia	Undergraduate training for general nurse (3 and 4 years programmes). Not postgraduate/specialized training in paediatric nursing.	PNAE, 2011 https://www2.rcn.org.uk/_data/assets/pdf_file/0018/434511/Findings Paediatric Nurse Education across Europe 2010f.pdf European Observatory, 2009 http://www.euro.who.int/_data/assets/pdf_file/0004/96367/E92607.pdf?ua=1
Spain	Undergraduate training for general nurse (4 years) + Postgraduate/specialized training in paediatric nursing (2 years).	PNAE, 2011 https://www2.rcn.org.uk/_data/assets/pdf_file/0018/434511/Findings Paediatric Nurse Education across Europe 2010f.pdf European Observatory, 2010 http://www.euro.who.int/_data/assets/pdf_file/0004/128830/e94549.pdf?ua=1
Sweden	Undergraduate training for general nurse (3 years) + Postgraduate/specialized training in paediatric nursing (1 year after 1 year of practice).	PNAE, 2011 https://www2.rcn.org.uk/_data/assets/pdf_file/0018/434511/Findings Paediatric Nurse Education across Europe 2010f.pdf European Observatory, 2012 http://www.euro.who.int/_data/assets/pdf_file/0008/164096/e

[96455.pdf?ua=1](#)

United Kingdom

Undergraduate training for paediatric nursing (3 years).

OR

Undergraduate training for general nurse (3 or 4 years) +
Postgraduate/specialized training in paediatric nursing (1-
1.5 years).

PNAE, 2011

[https://www2.rcn.org.uk/_data/assets/pdf_file/0018/434511/Findings Paediatric Nurse Education across Europe 2010f.pdf](https://www2.rcn.org.uk/_data/assets/pdf_file/0018/434511/Findings_Paediatric_Nurse_Education_across_Europe_2010f.pdf)

European Observatory, 2015

http://www.euro.who.int/_data/assets/pdf_file/0006/302001/UK-HiT.pdf?ua=1

Glossary of terms

A **child** refers to anyone under the age of 18 years old (UNCRC, 1992).

Children with complex clinical care needs have substantial care needs as a result of one or more congenital, acquired or chronic conditions, with need of access to multiple health, social and psychological support services. These children may have functional limitations that often required tailored technological assistance (Cohen et al. 2011, Elias & Murphy 2012). In the context of this task, the terms “complex health care needs”, “complex health needs”, “complex conditions” or “complex care needs” also refer to children with these conditions.

Community Health Nursing is synonymous with public health nursing. Community health nursing relies heavily on the systematic process of designing and delivering health services and nursing care to improve the health of the entire community. According to the American Nursing Association (ANA), public health nursing is the practice of promoting and protecting the health of populations using knowledge from nursing, social and public health sciences (Waldorf, 1999). The primary goal of community health nursing is to help a community protect and preserve the health of its members, while the secondary goal is to promote self-care among individuals and families (World Health Organization [WHO], 2010).

Curriculum/curricula is the totality of the education programme coherent in structure, processes and outcome and that links theory and practice in the professional education of a nurse or of a midwife (WHO, 2009).

Postgraduate/Specialized training in the context of this task refers to advanced education in one specific area of knowledge once finished the undergraduate education. They include master’s degrees, doctorates (PhDs) and specialization programmes.

Practical/Clinical instruction is that part of nurse training in which trainee nurses learn, as part of a team and in direct contact with a healthy or sick individual and/or community, to organise, dispense and evaluate the required comprehensive nursing care, on the basis of the knowledge, skills and competences which they have acquired. The trainee nurse shall learn not only how to work in a team, but also how to lead a team and organise overall nursing care, including health education for individuals and small groups, within health institutes or in the community (European Parliament and Council Directive, 2013).

Theoretical instruction is that part of nurse training from which trainee nurses acquire the professional knowledge, skills and competences required under paragraphs 6 and 7 of Article 31 at Directive 2013/55/EU. The training shall be given by teachers of nursing care and by other competent persons, at universities, higher education institutions of a level recognised as

equivalent or at vocational schools or through vocational training programmes for nursing (European Parliament and Council Directive, 2013).

Undergraduate training in the context of this task refers to the first academic degree that a person studies at an institution of higher education, such as a university. In the nursing area, the undergraduate education can refer to the nurse responsible for general care degree.

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<http://www.euro.who.int/en/about-us/partners/observatory/publications/health-system-reviews-hits>

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<https://www.medicalcouncil.ie/About-Us/Legislation/EU-Directive.pdf>

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Appendix 2: List of child-related search terms

- Child
- Paediatric
- Pediatric
- Newborn
- New-born
- Infant (*note: use the word "infan" instead of infant as it cannot bring the word infancy*)
- School
- Adolescent (*note: use the word "adolescen" instead of adolescent as it cannot bring the word adolescence*)
- Teenager
- Youth
- Young
- All ages (*note: only with the use of the word "ages" it will bring words related to "all ages"*)

Appendix 3: Definition of type of modules

- **Compulsory core modules:**

In this study, the term compulsory core modules has been used to denominate those modules with a total focus on children care, and that are compulsory for all the students of the general nursing programme. It for example includes modules such as *Paediatric Nursing* or *Nursing a Child*.

- **Child care mentioned within the context of other compulsory modules:**

This term denominates those modules that not have a total focus on children care, but that include any child-related search terms (Appendix 2) in their content description. These modules are focused on other areas of study, such as *Community Nursing* or *Mental Health Care*. These are also compulsory for all the students of the general nursing programme.

- **Elective modules:**

The term elective modules is utilised to name those modules with a total focus on children care, and that are optional within the curricula. This means that not all the students of the general nursing programme will be accessing these modules, if not only the proportion of students that have chosen them. It for example includes modules such as *Nursing Care of School Children* or *Paediatric Nursing in Intensive Care Units*.

- **Children mentioned within the context of other elective modules:**

This term denominates those modules that not have a total focus on children care, but that include any child-related search terms (Appendix 2) in their content description. These are also optional within the curricula, and are focused on other areas of study such as *Emergency Nursing* or *Oncology Nursing*.

Appendix 4: Quantification of child related search terms

Country	Total words in the document	Total times child-related search terms have been mentioned
Croatia	11506	97
Cyprus	7688	13
Estonia	5858	29
Finland	9582	23
France	15092	13
Greece	4503	25
Iceland	15319	85
Ireland	12532	12
Italy	17195	53
Latvia	30835	75
Lithuania	25060	76
Malta	16727	21
Norway	7325	8
Poland	44198	148
Portugal	50247	198
Romania	61783	77
Spain	48449	88

Appendix 5: Distribution of keywords by country and category

Distribution of keywords by country and category (1/2)

Category	Croatia	Cyprus	Estonia	Finland	France	Greece	Iceland	Ireland	Italy	Latvia	Lithuania
Provision of nursing care	16	4	9	4	2	0	4	1	7	10	14
Medical treatment, interventions and procedures	3	0	4	0	2	0	6	1	17	3	14
Identification of diseases and nursing diagnosis	1	2	0	1	0	0	6	0	0	2	0
Assessment and planning	4	0	5	3	0	0	9	0	10	1	3
Prevention and health promotion	6	0	5	1	0	0	1	0	3	8	4
Other knowledge and skills to work with children	0	3	0	0	0	0	0	1	5	1	1
Ethics and law	2	0	0	0	1	0	0	0	1	0	1
Family nursing	0	1	4	2	0	0	2	0	3	0	0
Accidents and emergencies	1	0	0	0	0	0	0	0	1	0	2
School nursing	0	1	0	0	1	0	1	0	0	0	0
Children with complex/special health care needs	1	0	0	0	0	0	0	0	2	0	0
Nurses roles	1	0	0	0	0	0	2	2	1	0	1
Pain management	0	0	0	0	0	0	0	0	1	0	1
Nursing care of children total	35	11	27	11	6	0	31	5	51	25	41
Pathologies and injuries	4	1	1	1	8	1	5	0	16	24	23
Growth and development	38	2	3	1	1	0	9	3	4	8	1
Child health specific characteristics	2	1	3	0	1	1	1	0	9	8	4
Basic needs	3	1	0	0	0	0	1	0	1	0	5
Paediatrics total	47	5	7	2	10	2	16	3	30	40	33
Children's and family experiences	3	0	0	4	0	0	5	1	0	0	0
Support and preparation	11	3	0	0	0	0	0	1	2	0	1
Communication and relationships	4	2	0	0	1	0	2	1	4	3	2
Health education and counselling	0	4	6	2	0	0	0	0	3	0	0
Psychosocial aspects total	18	9	6	6	1	0	7	3	9	3	3
Total	100	25	40	19	17	2	54	11	90	68	77

Distribution of keywords by country and category (2/2)

Category	Malta	Norway	Poland	Portugal	Romania	Spain	Total
Provision of nursing care	10	1	18	13	15	39	167
Medical treatment, interventions and procedures	0	3	14	5	47	22	141
Identification of diseases and nursing diagnosis	0	0	13	2	31	21	79
Assessment and planning	0	0	4	3	22	13	77
Prevention and health promotion	0	1	8	2	21	0	60
Other knowledge and skills to work with children	3	0	2	0	0	1	17
Ethics and law	0	0	4	0	2	6	17
Family nursing	2	0	0	0	0	1	15
Accidents and emergencies	0	0	1	4	3	0	12
School nursing	0	0	6	1	1	1	12
Children with complex/special health care needs	0	0	4	1	0	1	9
Nurses roles	0	0	1	0	1	0	9
Pain management	0	0	0	1	0	4	7
Nursing care of children total	15	5	75	32	143	109	622
Pathologies and injuries	1	11	46	1	110	4	257
Growth and development	1	0	5	9	10	14	109
Child health specific characteristics	1	0	8	2	2	2	45
Basic needs	0	0	7	0	9	2	29
Paediatrics total	3	11	66	12	131	22	440
Children's and family experiences	4	0	4	4	4	3	32
Support and preparation	0	0	2	0	8	1	29
Communication and relationships	2	0	0	0	6	0	27
Health education and counselling	0	0	5	0	2	1	23
Psychosocial aspects total	6	0	11	4	20	5	111
Total	24	16	152	48	294	136	1173