



Royal College of Nursing

Competences:

an education and training competence framework for capillary blood sampling and venepuncture in children and young people



Acknowledgements

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Introduction

Developing skills in performing capillary blood sampling and venepuncture can facilitate holistic care and timely treatment. For nurses working with children and young people this is usually regarded as an extended role. Before starting a programme of education and training, practitioners should be competent and confident to care for children and young people.

Competence can be defined as: “The state of having the knowledge, judgement, skills, energy, experience and motivation required to respond adequately to the demands of one’s professional responsibilities” (Roach, 1992).

This education and training competence framework for capillary blood sampling and venepuncture in children and young people is an important step forward. First published in 2005, it has been revised in 2013 and again in 2016 to reflect a number of current political and professional issues and initiatives.

This framework describes the theoretical and practical competences, and the overall indicative content necessary for education and training programmes to meet the needs of children and young people. It aims to support consistent curriculum and practice development so that practitioners can develop and maintain the ability to carry out this task, regardless of where they work.

The framework should also be used to develop new programmes and to review and revise existing ones. By using this framework, other professionals and employers can be confident in the standard and proficiency of practitioners.

Developing competence within age bands

There are considerable differences between children of varying ages, and we recommend that practitioners develop competence within specific age bands according to their area of practice:

- 0 to 1 year
- 1 to 5 years
- 5 years and above.

1. Guidance for programme development

When either planning new courses or reviewing existing courses, we recommend that hospitals, community services, and universities use this as their competence framework.

Education pathways

This framework can be used to develop hospital-based training programmes for nurses and health care support workers working with children and young people. Alternatively, it can be used to review existing programmes to ensure that they meet the needs of children and young people. Training may be linked to other competences, such as those required for cannulation.

Indicative training content should encompass:

- Department of Health requirements for record-keeping
- the Nursing and Midwifery Council Code (NMC, 2015)
- legal, professional and local policies regarding enhanced nursing roles
- accountability when performing capillary blood sampling and venepuncture
- local policies and procedures for capillary blood sampling and venepuncture in children and young people
- evidence base for good practice in capillary blood sampling and venepuncture
- policies and good practice guidance in obtaining informed consent
- policies and good practice guidance for therapeutic holding of children
- anatomy and physiology of capillaries, veins, arteries and nerves
- devices and equipment for capillary blood sampling and venepuncture and their use including the use of safety devices where possible
- distraction techniques
- safe practice in the handling and disposing of sharps
- role of the NHS Improvement and Medicines and Healthcare Products Regulatory Agency, and equivalent organisations in Scotland and Northern Ireland

- Right patient – right care (NPSA, 2004a)
- Health and Safety at Work Act 1974 and other regulations (HSE).

Teaching and learning strategies

Capillary blood sampling and venepuncture in children and young people is a practical skill, which is underpinned by theoretical knowledge. In England (and equivalents in NI, Scotland and Wales) teaching and learning strategies should focus on developing the competence and confidence of the practitioner in performing the procedure safely, and with minimum distress to the child or young person. Assessment of prior knowledge, particularly in caring for the child undergoing intravenous therapy, can be useful in developing programmes that reflect the individual needs of the practitioner.

It is recommended that practitioners first develop their practical skills on older children where appropriate as they may be more likely to remain still during blood sampling. This will ensure they learn the dexterity necessary before being introduced to the clinical holding aspects required for younger children.

A variety of ways of learning can be used for these programmes:

- workbooks
- problem-based learning
- taught provision
- scenarios
- supervised practice
- e-learning
- simulation
- blended learning.

Assessment

Each programme needs to assess competence in practice. Practice assessments should reflect the competences and learning outcomes. There are various assessment methods that are appropriate:

- observation under supervision and demonstration
- reflective practice
- portfolio of evidence showing skills, experience and development – supported by supervisors
- formal examination (objective structured clinical examination).

Each of these relies on the use of practice assessors. Programme developers should consider who this may be and the criteria needed to become and maintain this status. We recommend that an assessor should be experienced in capillary blood sampling and venepuncture in children and young people. Their ability to assess others should be determined by a formal assessment process. We also advise that they receive clear guidance on their role and responsibilities.

Regular updating and assessment of skills can assist in ensuring ongoing competence. We suggest that this takes place at least annually.

2. Competences and learning outcomes

Domain 1: professional and legal issues

Practical competences

- Performs capillary blood sampling and venepuncture in accordance with legal, professional and policy requirements.
- Uses appropriate evidence to underpin best practice in capillary blood sampling and venepuncture in children and young people.
- Records and reports information in a manner that is clear, concise, timely and accurate.
- Reflects on own practice and takes action to develop and improve knowledge and skills.
- Describes circumstances where it is inappropriate to perform capillary blood sampling and venepuncture and the alternative action to take.
- Demonstrates best practice in gaining informed consent from the child and family.
- Demonstrates awareness of the limits of own skill/competence/knowledge.
- Demonstrate awareness of local aseptic non-touch technique (ANTT) policy.

Theoretical competences

At the end of a course of study and period of supervised practice the nurse will be able to:

- discuss the legal and professional issues associated with performing capillary blood sampling and venepuncture
- outline current evidence to support best practice in capillary blood sampling and venepuncture
- describe the process for obtaining informed consent from the child/young person and family
- give an account of professional and local policies relevant to performing capillary blood sampling and venepuncture
- describe the legal requirements for good recordkeeping in relation to capillary blood sampling and venepuncture
- reflect on own practice, identifying accountability and competence issues.

Domain 2: preparing self, child and family

Practical competences

- Performs the preparatory processes for capillary blood sampling or venepuncture in a safe and effective manner.
- Uses appropriate procedures for correctly identifying the patient.
- Describes the anatomy and physiology applicable to capillary blood sampling and venepuncture.
- Assesses the child's physical and psychological needs before, during and after capillary blood sampling and venepuncture and uses these in preparing a care plan.
- Employs appropriate methods to select and prepare suitable sites for capillary blood sampling and venepuncture and selects suitable collection devices and equipment, giving rationale for choice.
- Demonstrates knowledge of pharmacological and nonpharmacological pain relief, including the correct application of local anaesthetic cream to an appropriate site.
- Identifies when other health professionals eg hospital play specialist or child psychologist, should be involved in preparation and explains the potential for therapeutic holding, and checks that the child and/or parents are happy with this.
- Uses strategies to minimise the risk of injury to others who may be present.
- Performs procedure using ANTT principles.
- Selects the most suitable equipment available and uses safety devices, if appropriate.

Theoretical competences

At the end of a period of study and supervised practice the nurse will be able to:

- give an account of the anatomy and physiology of capillaries and veins, and describe the relevance for capillary blood sampling and venepuncture
- explain the theory of capillary blood sampling and venepuncture in children and young people

- describe the methods used to identify appropriate and inappropriate sites for capillary blood sampling and venepuncture
- develop a care plan appropriate to the child's physical, developmental and psychological needs before, during, and after capillary blood sampling and venepuncture
- demonstrate good practice when preparing self, child and family for capillary blood sampling and venepuncture, including ANTT
- create a safe environment for performing capillary blood sampling and venepuncture
- identify the various devices and equipment used for capillary blood sampling and venepuncture for children of different ages
- whenever possible consider the use of safety devices as they become available for children and are fit for purpose, according to local hospital policy/guidelines
- explain the interventions that minimise a child or young person's pain and anxiety during capillary blood sampling and venepuncture
- describe the roles of other health professionals in preparing children or young people for painful procedures
- give an account of the use of patient group directives.
- Takes appropriate action to prevent iatrogenic anaemia.
- Demonstrates practical ability and dexterity during capillary blood sampling and venepuncture.
- Responds appropriately to troubleshoot or overcome any difficulties experienced during the procedure.
- Identifies the appropriate blood container and reagent for the tests required, and fills them in the correct order.
- Fills, labels and dispatches containers correctly, demonstrating knowledge of factors that can adversely influence the results.
- Identifies reasons why capillary blood sampling and venepuncture may be unsuccessful and describes actions to address this.
- Describes correct care of the site following the procedure.
- Removes and disposes of devices and equipment in accordance with infection control and health and safety policies.
- Communicates with the child and family during and after the procedure in a manner that minimises anxiety and encourages compliance.
- Describes the indications for some frequently used blood tests.

Domain 3: performing capillary blood sampling and venepuncture

Practical competences

- Demonstrates the safe application of the principles of restrictive physical intervention and therapeutic holding in children and young people (RCN, 2010).
- Demonstrates the correct procedures for minimising infection, including hand washing, use of gloves, apron and aseptic technique.
- Uses appropriate strategies for minimising pain associated with capillary blood sampling and venepuncture.
- Applies pressure or a tourniquet appropriately and safely.

Theoretical competences

At the end of a period of study and supervised practice the nurse will be able to:

- perform checking procedures that maximise patient safety
- wash their hands in accordance with good practice guidance
- demonstrate good practice when holding the child or young person still during the procedure
- identify the containers and volumes required for effective blood sampling in children and young people
- demonstrate knowledge of the correct sequence for filling blood containers to avoid contaminating specimens

- calculate the maximum amount of blood that should be taken from a child
- perform capillary blood sampling and venepuncture safely on children and young people of varying ages
- identify strategies for minimising anxiety and pain when performing capillary blood sampling and venepuncture
- demonstrate knowledge of the indications for certain commonly used blood tests
- access reference ranges to compare blood results
- describe factors that can lead to erroneous test results
- describe techniques for encouraging and rewarding the child undergoing capillary blood sampling and venepuncture.
- discuss infection control and health and safety policies and procedures applicable to capillary blood sampling and venepuncture
- describe the procedures for reporting errors and adverse incidents
- give account of relevant health and safety and infection control policies
- demonstrate knowledge of factors that influence the safety of the child, family and self during capillary blood sampling and venepuncture
- create a safe environment for performing capillary blood sampling and venepuncture.

Domain 4: risks and hazards

Practical competences

- Describes the risks and complications to self and child associated with capillary blood sampling and venepuncture, and acts to prevent these.
- Explains the infection control and health and safety procedures required for safe capillary blood sampling and venepuncture.
- Recognises, reports and records errors or adverse incidents associated with capillary blood sampling and venepuncture.
- Follows appropriate policies and procedures when disposing of equipment and hazardous substances.
- Takes action to maximise the safety of the child, family and self when performing capillary blood sampling and venepuncture.

Theoretical competences

At the end of a period of study and supervised practice the nurse will be able to:

- outline the risks and complications associated with capillary blood sampling and venepuncture, their prevention and treatment

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4. Online resources

- **Action for Sick Children**
www.actionforsickchildren.org
- **ANTT**
www.antt.org.uk
- **Department for Education**
www.education.gov.uk
- **Department of Health (England)**
www.gov.uk/dh
- **Department of Health, Social services and Public safety (Northern Ireland)**
www.dhsspsni.gov.uk
- **Evidence-based Practice in Infection Control [EPIC 2]**
www.ncbi.nlm.nih.gov/pubmed/11161888
- **Hand hygiene (Scotland)**
www.washyourhandsofthem.com
- **Health and Safety Executive**
www.hse.gov.uk
- **Health Care Standards Unit**
www.hcsu.org.uk
- **Infection Prevention Society**
www.ips.uk.net
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www.evidence.nhs.uk
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- **NHS Litigation Authority**
www.nhsla.com
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- **Northern Ireland Patient Safety Forum**
www.hscsafetyforum.com
- **Northern Ireland Practice and Education Council for Nurses and Midwives**
www.nipec.n-i.nhs.uk
- **Nursing and Midwifery Council**
www.nmc-uk.org
- **Royal College of Nursing**
www.rcn.org.uk
- **Royal College of Paediatrics and Child Health**
www.rcpch.ac.uk
- **Scottish Patient Safety Programme**
www.patientsafetyalliance.scot.nhs.uk
- **Skills for Health**
www.skillsforhealth.org.uk
- **UK Health and Safety legislation**
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- **Vascular access and infusion related policies and guidelines (Health Service Executive Republic of Ireland)**
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- **E-book by Sarah Phillips**
<https://itunes.apple.com/gb/book/venepuncturecannulation/id426639682?mt=11>



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