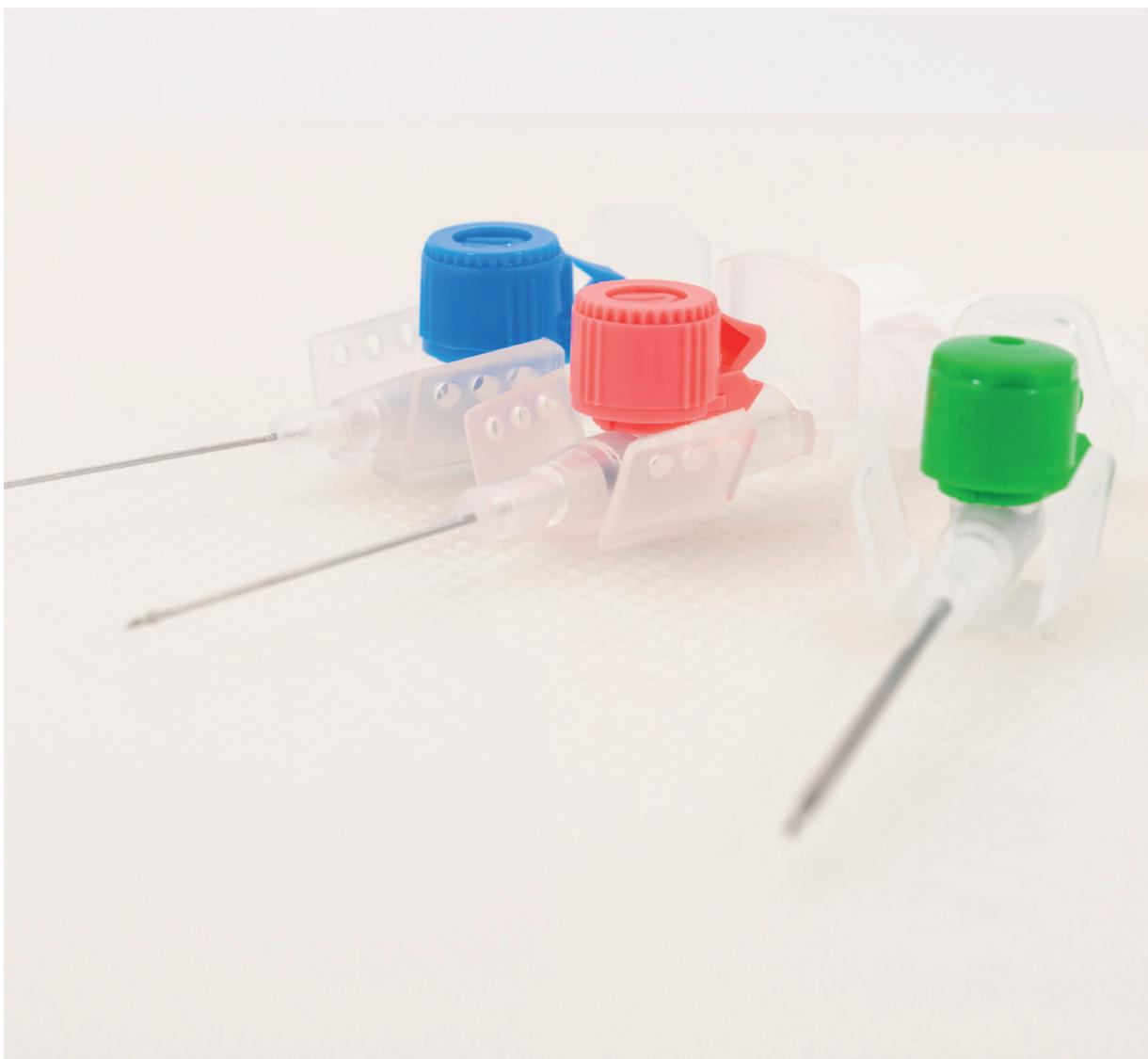




Royal College of Nursing

Competences:

an education and training competence framework for peripheral venous cannulation in children and young people



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Introduction

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 peripheral venous cannulation in children and young people was first published in 2005. It has been revised in 2013 and again in 2016 and addresses a number of political and professional issues and initiatives.

In order to facilitate holistic and timely treatment for patients, nurses increasingly need to develop competence in inserting peripheral intravenous cannulae. For registered nurses working with children and young people this is usually regarded as an expanded role. Before starting a programme of education and training, in most cases practitioners will need to demonstrate competence and experience in administering medicines intravenously to children and young people.

This framework identifies 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.

It 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.

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

1. Guidance for programme development

Education pathways

This framework can be used to develop training programmes for registered nurses 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 capillary blood sampling and venepuncture.

Indicative training content should encompass:

- the Nursing and Midwifery Council Code (2015)
- legal, professional and local policies regarding enhanced nursing roles
- accountability when performing peripheral venous cannulation
- local policies and procedures for peripheral venous cannulation in children and young people
- the evidence base for good practice in peripheral venous cannulation
- policies and good practice guidance in obtaining informed consent
- policies and good practice guidance for holding and restraining children
- the anatomy and physiology of veins, arteries and nerves
- distraction techniques
- safe practice in the handling and disposing of sharps
- the role of the NHS Improvement and the Medicines and Healthcare Products Regulatory Agency related agencies, and equivalent organisations, in Scotland and Northern Ireland.
- NPSA guidance in Right patient – right care (2004a)
- Health and Safety at Work Act 1974 and other regulations (HSE)
- phlebitis, thrombophlebitis, infiltration, extravasation and nerve injury
- occlusion.

Teaching and learning strategies

Peripheral venous cannulation in children and young people is a practical skill, underpinned by theoretical knowledge. 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.

It is recommended that consideration is given to providing practitioners with the opportunity to develop their practical skills initially on older children where appropriate, as they are more likely to remain still during cannulation. This will ensure they learn the dexterity necessary for the skill before being introduced to the clinical holding aspects that are necessary for younger children.

Assessment of prior knowledge, particularly in performing venepuncture, can be useful in developing programmes that reflect the individual needs of the practitioner. A variety of new ways of learning can be used for these programmes, including:

- 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, such as 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 achieve and maintain this status. We recommend that an assessor should be experienced in performing peripheral venous cannulation 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 peripheral venous cannulation in accordance
- with legal, professional and policy requirements.
- Records and reports information in a manner that is clear, concise, timely and accurate.
- Demonstrates best practice when gaining informed consent from children and young people
- Demonstrates awareness of the limits of own skill, competence and knowledge.

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 peripheral venous cannulation
- outline current evidence to support best practice in peripheral venous cannulation
- describe the process for obtaining informed consent from the child/young person and their family
- give an account of professional and local policies relevant to performing venous cannulation in children and young people
- describe the legal requirements for good record keeping in relation to peripheral venous cannulation
- reflect on own practice, identifying accountability and competence issues
- describe situations where it is inappropriate to insert a peripheral venous cannula and the alternative action to take.

Domain 2: preparing self, child and family

Practical competences

- Identifies the preparatory processes necessary for safe, effective peripheral venous cannulation.

- Performs appropriate procedures for correctly identifying the patient.
- Uses appropriate methods to select and prepare suitable sites for peripheral venous cannulation.
- Assesses the child's physical, developmental and psychological needs before, during and after cannulation and uses these to prepare a care plan.
- Selects devices and equipment appropriate for peripheral venous cannulation and gives rationale for choice.
- Considers the use of safety cannulae and equipment where ever possible.
- Communicates effectively with the child and family to help reduce anxiety before, during and after peripheral venous cannulation.
- Uses appropriate strategies for minimising pain associated with peripheral venous cannulation.
- Demonstrates knowledge of pharmacological and nonpharmacological pain relief.
- Applies local anaesthetic cream as prescribed or under local patient group directive, and in a way that maximises its effect.
- Identifies when other health professionals should be involved in preparation or assisting with the procedure.
- Cleans the skin.

Theoretical competences

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

- describe the anatomy and physiology of veins, arteries and nerves, applicable to peripheral venous cannulation
- give an account of the anatomy and physiology of veins, arteries and nerves and describe the relevance for peripheral venous cannulation
- explain the theory of cannulation in children and young people
- demonstrate good practice when preparing self, child and family for insertion of a peripheral venous cannula
- describe the methods used to identify appropriate and inappropriate sites for peripheral venous cannulation

- assess the physical, developmental and psychological needs before, during and after cannulation and relate these to the care plan
- identify the various devices and equipment used for peripheral venous cannulation and make appropriate choices for differing circumstances
- considers the use of safety cannulae and equipment when possible as they become available for children and are fit for purpose, according to local trust policies/guidelines
- explain the pharmacological and non-pharmacological interventions that can help to minimise a child or young person's pain and anxiety regarding cannulation
- apply local anaesthetic correctly and in accordance with policies
- describe situations in which other health professionals should be involved in preparation or assisting with the procedure
- give an account of the use of patient group directives.

Domain 3: inserting the cannula

Practical competences

- Demonstrates the safe application of the principles of 'restraining, holding still and containing children' (RCN, 2010).
- Applies pressure or a tourniquet appropriately and safely.
- Uses the correct sequence of actions when performing peripheral venous cannulation.
- Demonstrates the correct procedures for minimising infection including hand washing, use of gloves, apron and appropriate technique.
- Demonstrates practical ability and dexterity when inserting a peripheral venous cannula.
- Identifies reasons why cannulation may be unsuccessful and describes actions to address this.
- Uses an appropriate technique and dressing to secure the cannula.

- Communicates with the child and family during the procedure in a manner that minimises anxiety and encourages compliance.
- Demonstrates good practice in immobilising the limb and stabilising the vein during and after the procedure.
- Recognises when cannulation has failed and takes appropriate action.
- Records information concerning the procedure appropriately.

Theoretical competences

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

- identify reasons why cannulation may be unsuccessful and describe actions to address this
- identify good practice in immobilising the limb and stabilising the vein during and after the procedure
- discuss infection control and health and safety policies and procedures applicable to peripheral venous cannulation
- identify strategies to minimise anxiety and pain when performing peripheral venous cannulation
- describe legal and professional requirements for record-keeping
- describe techniques for encouraging and rewarding the child undergoing peripheral venous cannulation
- understand how to recognise and manage vasovagal reactions.

Domain 4: cannula care and removal

Practical competences

- Prepares a suitable care plan for the ongoing management of a child or young person with a peripheral venous cannula in place.
- Describes and gives a rationale for observations recorded when a peripheral venous cannula is in place.

- Document VIP (visual infusion phlebitis) score at least daily (Gallant and Schultz, 2006)
- Identifies the circumstances when a peripheral venous cannula should be re-sited or removed.
- Removes and disposes of intravenous peripheral cannula safely.
- Acts to minimise pain, bruising and distress when removing a peripheral venous cannula
- Complies with policies when making records of cannula removal
- Removes a peripheral venous cannula safely, causing minimal distress to the child or young person.

Theoretical competences

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

- explain the ongoing care required when a peripheral venous cannula is in place
- communicate a care plan to other team members
- describe the reasons for removing or re-siting a peripheral venous cannula
- assess the need for re-siting a cannula
- know how to remove a peripheral venous cannula safely, causing minimal distress to the child or young person
- give an account of the information to be recorded when a peripheral venous cannula is removed.

Domain 5: risks and hazards

Practical competences

- Describes the risks and complications associated with peripheral venous cannulation and acts to prevent or minimise the effects.
- Follows appropriate policies and procedures when disposing of equipment and hazardous substances
- Takes action to maximise the safety of self, child and others when performing peripheral venous cannulation.

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 peripheral venous cannulation, and the prevention and treatment for these
- give an account of local policies concerning the prevention and management of extravasation injuries
- describe the procedures for reporting errors and adverse incidents, including the procedures for managing a needlestick injury
- give an account of relevant health and safety and infection control policies
- identify factors that influence the safety of the child, family and self during peripheral venous cannulation.

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4. Online resources

- Action for Sick Children
www.actionforsickchildren.org
- Aseptic Non Touch Technique
www.antt.org.uk
- Department for Education
www.gov.uk
- Department of Health (England)
www.gov.uk/dh
- Department of Health, Social services and Public safety (Northern Ireland)
www.dhspni.gov.uk
- Evidence-based Practice in Infection Control
www.epic.tvu.ac.uk
- 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
- Joanna Briggs Institute
www.jbi.edu.au
- National Association of Hospital Play Staff
www.nahps.org.uk
- National Patient Safety Agency
www.npsa.nhs.uk
- NHS Education for Scotland
www.nes.scot.nhs.uk
- NHS Evidence
www.evidence.nhs.uk
- NHS Improvement
<https://improvement.nhs.uk/>
- NHS Litigation Authority
www.nhsla.com
- NHS Scotland
www.show.nhs.uk
- NHS Wales
www.wales.nhs.uk
- 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
www.coshh-essentials.org.uk
- Health Service Executive Republic of Ireland vascular access and infusion related policies and guidelines
www.ivpolicy.com
- Venepuncture and Cannulation, Sarah Phillips
itunes.apple.com/gb/book/venepuncturecannulation/id426639682
- VIP score
www.vipscore.net/INS2011



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