



*Curriculum Requirement for Venepuncture and  
Peripheral Intravenous Cannulation (VPIC)  
Course*

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# Curriculum Requirement for Venepuncture and Peripheral Intravenous Cannulation

This curriculum is developed by the National Nursing Academy (NNA) to guide clinical faculty in designing, planning and implementing curriculum and assessment plans for clinical nursing skill-based course – Venepuncture and Peripheral Intravenous Cannulation (VPIC). The VPIC curriculum can be adopted by any healthcare institution that delivers the content stated herein and assessments to meet the stated performance standards.

## NAME OF INSTITUTION

XXXXX

## TITLE OF COURSE

Venepuncture and Peripheral Intravenous Cannulation Course (for nurses)

## TITLE OF CERTIFICATE AWARD

Certificate of Competence

## COURSE COORDINATOR

The course is led by a qualified Registered Nurse (RN) with current and valid practicing certificate issued by SNB.

## CURRICULUM PLANNING COMMITTEE

Curriculum to be drafted by Nurse Educator(s) and/or Subject Matter Expert(s)

## NEED FOR THE COURSE

The Venepuncture and Peripheral Intravenous Cannulation (VPIC) course equips nurses with knowledge, skills and attitudes for safe venepuncture and/or peripheral intravenous cannulation to patients.

## DURATION OF THE COURSE:

**Theoretical component:** **7 hours** (includes practical, theory written and skill competency assessment)

*\*can use e-learning as part of the training hours*

**Clinical component:** **3 hours** (time used to perform 3 successful assessments for venepuncture and peripheral intravenous cannulation each to meet the assessment criteria)

*\*Up to 12 weeks on the job practice and assessment of competence using a workplace-based assessment tool or equivalent*

**Total:** **10 hours**

## **TARGET GROUP OF LEARNERS**

The target learners include RNs and Enrolled Nurses (ENs) without a valid certificate in venepuncture and peripheral intravenous cannulation.

### Trainer to learners ratio

Theory: 1 trainer: 40 learners (max)

Practical: 1 trainer: 12 learners (max)

## **ENTRY REQUIREMENT**

This course is targeted at nurses who meet any one of the following criteria:

- without prior knowledge and skills on venepuncture and peripheral intravenous cannulation
- who require some form of refresher or re-assessment of clinical competency
- without a valid certificate in venepuncture and peripheral intravenous cannulation as part of their nursing scope in managing patients under their care

## **OVERVIEW OF THE COURSE**

One of the core skills required for a nurse is to perform venepuncture and peripheral intravenous cannulation to patients. The course provides learners with the underlying principles and opportunity to gain competence in performing VPIC in a clinical setting. As such, nurses working in the clinical areas shall possess the relevant clinical knowledge, competencies and attitudes pertaining to VPIC.

## **AIM OF THE COURSE**

This course aims to equip nurses with knowledge and technical skills to ensure safe performance of VPIC.

## **EXPECTED LEARNING OUTCOMES OF THE COURSE**

Upon completion of this course, the learner will be able to:

- Demonstrate safe practice and professional accountability when performing VPIC.
- Perform accurate and holistic assessment in the selection of venous sites, venous tone and correct requisites, and identify patients' specific indications, contraindications and possible risks.
- Acquire and maintain competence on the skills necessary to perform VPIC.
- Apply knowledge of the institution's policies and procedures when performing VPIC.
- State the potential complications following VPIC, prevent, recognise and manage complications associated with VPIC.
- Discuss the legal and ethical aspects involved when patients develop complications and problems arising from VPIC.

## CORE CONTENT

1. General concepts (organisation policies and procedural guidelines, infection prevention and control)
2. Nursing knowledge (anatomy and physiology, requisites preparation, techniques of skill performing, management of complication, critical thinking and decision making)
3. Legal and ethical concepts (accountability and responsibilities of the nurses during situations where patients develop complications and problems arising from VPIC)
4. Procedure for venepuncture and peripheral intravenous cannulation

## COURSE STRUCTURE

Module	Title	Lecture/ Tutorial (hrs)	Practical (hrs)	Clinical Practicum (hrs)
1	General concepts	0.5		
2	Theoretical components – nursing knowledge	2		
3	Legal and ethical concepts	0.5		
4	Theory assessment	0.5		
5	Skill practice		3	
6	Practical assessment		0.5	
<b>Theory to include theory assessment</b>		<b>3.5 (exclude Lunch Break)</b>		
<b>Practical to include practical assessment</b>			<b>3.5</b>	
<b>Clinical practicum</b>				<b>3</b>
<b>TOTAL HOURS</b>			<b>10</b>	

## TEACHING AND LEARNING STRATEGIES

Theory teaching using different pedagogies – e-learning, didactic, discussions, video

Skill demonstration

Guided skill practice

## ASSESSMENT METHODOLOGY AND WEIGHTAGE

The assessment in the VPIC course for nurses comprises of:

Assessment Methodology	Assessment Criteria
Single Best Answer (SBA) or Multiple-Choice Question (MCQ)	80% correct responses via a 30 item SBA/MCQ test. <u>Time/Duration:</u> 30 minutes  Learners are allowed an additional 2 (two) attempts to meet passing criteria of 80%. After which, a re-course is indicated regardless of the outcomes of practical assessment.
Skill Performance and Competency  (a) Structured Competency Assessment (skill practice)  (b) Clinical Competency Assessment (OJT)	(a) Structured Competency Assessment (skill practice)  Successful completion of VPIC with minimal prompting in simulated environment.  (b) Clinical Competency Assessment (OJT)  Minimum 3 successful assessments for venepuncture and peripheral intravenous cannulation <u>each</u> within 12 weeks (3 months).  To be demonstrated by competency assessment/verification by nursing supervisors.

Nurses have successfully completed the course upon meeting all assessment criterion (80% for theory assessment & 100% for both simulated and clinical competency assessment) and with the submission of completed “Venepuncture and Peripheral Intravenous Cannulation” competency checklist to Nursing Education unit within 12 weeks (3 months) of the course completion date.

A standard skill checklist indicating the minimum requirement is attached as reference to develop competency assessment checklist that meets institution requirement.

## COURSE EVALUATION

The course coordinator will review the contents every year (or as necessary) to update the curriculum, course materials (includes eLearning materials), theory test and clinical competency checklist.

HOD of Nursing Education will be provided with the course evaluation done by learners that is reviewed and endorsed for course continuous improvement.

## **PHYSICAL FACILITIES**

The theory sessions require a classroom with audio-visual setup. eLearning delivery is supported by the local learning management system.

The practical sessions require skills laboratory for small group hands-on practice on part task models that support blood taking and cannula insertion with flashback.

## Standard Skills Checklist for Venepuncture and Peripheral Intravenous Cannulation

### ROLES AND RESPONSIBILITIES

<b>The Learner</b>	<ol style="list-style-type: none"> <li>1. Achieve the required level of competency as stipulated in the skills checklist.</li> <li>2. Seek feedback from the trainer/assessor immediately after each practice/assessment.</li> <li>3. Identify areas for improvement and improve on the performance</li> <li>4. Ensure the skills competency is completed within the allocated time frame.</li> <li>5. Submit the completed checklist to Nursing Education Unit through the ward supervisor.</li> </ol>
<b>The Trainer</b>	<ol style="list-style-type: none"> <li>1. Ensure that the learner demonstrates competency in all the steps stipulated in the checklist.</li> <li>2. Provide feedback to the learner immediately following each supervised practice/assessment.</li> <li>3. Ensure that the learner has achieved the required level of competency prior to performing the skill on patients independently.</li> <li>4. Indicate the final result at the end of the assessment for which the learner must acknowledge and fill in the feedback section.</li> </ol>

### PERFORMANCE STANDARDS OF VENEPUNCTURE

<b>Assessment of knowledge</b>	Apply venepuncture procedural knowledge based on hospital policies/protocol
<b>Infection control</b>	Demonstrate aseptic/clean technique and standard (universal) precautions in preparation, administration and follow up action
<b>Consent</b>	<ul style="list-style-type: none"> <li>• Explain procedure to patient and obtain verbal consent</li> <li>• Inform patient of anticipatory pain</li> </ul>
<b>Preparatory Phase</b>	<ul style="list-style-type: none"> <li>• Check diagnosis and medical history, doctor's order, medication record, contraindication to venepuncture</li> <li>• Prepare the requisites</li> <li>• Identify appropriate site for venepuncture</li> </ul>
<b>Performance Phase</b>	<ul style="list-style-type: none"> <li>• Approach and identify patient</li> <li>• Apply tourniquet appropriately</li> <li>• Re-palpate vein to confirm identified site and ensure visibility</li> <li>• Perform venepuncture safely and competently</li> <li>• Collect blood specimen in the correct order of drawing and invert tubes gently as required</li> <li>• Remove needle after disengaging the last blood tube and apply digital pressure until no bleeding is observed</li> </ul>
<b>Evaluation Phase</b>	<ul style="list-style-type: none"> <li>• Clear used requisites</li> <li>• Label and dispatch blood specimen based on hospital policies/protocol</li> <li>• Evaluate the patient's response towards the venepuncture, condition of the site, and document accordingly</li> <li>• Provide education to patient on the care of puncture site</li> <li>• Inform doctor and record any unusual occurrence, carry out appropriate intervention</li> <li>• Follow up on results of blood investigations done</li> </ul>

## PERFORMANCE STANDARDS OF PERIPHERAL INTRAVENOUS CANNULATION

<b>Assessment of knowledge</b>	Apply cannulation procedural knowledge based on hospital policies/protocol
<b>Infection control</b>	Demonstrate aseptic/clean technique and standard (universal) precautions in preparation, administration and follow up action
<b>Consent</b>	<ul style="list-style-type: none"> <li>• Explain procedure to patient and obtain verbal consent</li> <li>• Inform patient of anticipatory pain</li> </ul>
<b>Preparatory Phase</b>	<ul style="list-style-type: none"> <li>• Check diagnosis, doctor's order, medication record, contraindication to cannulation</li> <li>• Prepare the requisites</li> <li>• Identify appropriate site for IV cannulation</li> </ul>
<b>Performance Phase</b>	<ul style="list-style-type: none"> <li>• Approach and Identify patient</li> <li>• Apply tourniquet appropriately</li> <li>• Re-palpate vein to confirm identified site and ensure visibility</li> <li>• Perform cannulation safely and competently and ensure cannula patency</li> <li>• Secure cannula with dressing and indicate insertion date based on hospital policies/protocol</li> </ul>
<b>Evaluation Phase</b>	<ul style="list-style-type: none"> <li>• Clear used requisites</li> <li>• Evaluate the patient's response towards the cannulation, condition of the cannula site, and document accordingly</li> <li>• Provide education to patient on the care of cannula site</li> <li>• Inform doctor and record any unusual occurrence, carry out appropriate intervention</li> <li>• Check cannula site periodically based on hospital policies/protocol</li> </ul>



## OUTCOME OF ASSESSMENT

	VENEPUNCTURE		
	SUCCESSFUL ATTEMPT 1	SUCCESSFUL ATTEMPT 2	SUCCESSFUL ATTEMPT 3
	Date:	Date:	Date:
Assessor's Designation /Name			
Assessor's Signature			
Learner's Signature			
	PERIPHERAL INTRAVENOUS CANNULATION		
	SUCCESSFUL ATTEMPT 1	SUCCESSFUL ATTEMPT 2	SUCCESSFUL ATTEMPT 3
	Date:	Date:	Date:
Assessor's Designation /Name			
Assessor's Signature			
Learner's Signature			

## FEEDBACK ON OUTCOME BY ASSESSOR

(Feedback on the overall performance. To state the number of unsuccessful attempts (if any) and document any area of skills gap and improvement needed.)

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## VALIDATED BY NURSING SUPERVISOR AND NURSE EDUCATOR

Designation (NM/NC/NE/CM)	Nursing Supervisor	Nurse Educator
Name		
Signature		
Date		

\* Delete where applicable

Legend

NM: Nurse Manager	NC: Nurse Clinician	NE: Nurse Educator	CM: Clinic Manager
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## **ACKNOWLEDGEMENTS**

We would like to thank the public healthcare institutions and nursing representatives for their valuable inputs in the development of the curriculum requirement for the VPIC course.