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Acronyms:

| | |
|-------|---|
| MoH | Ministry of Health |
| DGNA | Directorate General of Nursing Affairs |
| HQ | Head Quarters |
| DGQAC | Directorate General of Quality Assurance Center |
| HCAIs | Health Care Acquired Infection |
| IV | Intravenous |
| PIVC | Peripheral Intravenous Cannula |
| RN | Registered Nurse |
| PPE | Personal Protective Equipment |



Policy & Procedure on Insertion of Peripheral Intravenous Cannula

1. Introduction

Every health care institution under the Ministry of Health (MoH) is committed to minimizing and reducing the risk of Healthcare Associated Infections (HCAIs) and providing a safe environment where patients can be assured that safe best practice is being followed at all times. Peripheral intravenous (IV) cannulation is an invasive procedure which can predispose the patient to an increased risk of local and systemic infection from micro-organisms introduced either at the time of insertion or when insitu. Evidence based procedures related to this policy can be found within each healthcare institution on the Al Shifa Health information system under Lippincott Nursing Procedure.

2. Scope

This policy applies to all nurses working in the Ministry of Health Care Institutions and Private institutions, who carry out the cannulation procedure or care for peripheral cannula as part of their role.

3. Purpose

- 3.1 To provide clear guidelines to nurses at all levels to be competent in insertion and caring of peripheral IV line.
- 3.2 To provide a clear picture on the roles and responsibilities of all levels of nursing in terms of training and compliance on safe insertion of peripheral intravenous cannula.
- 3.3 To reduce the incidence of cannula-related complications, with particular emphasis on associated infection risks.
- 3.4 To provide direction related to the training and preparation of nurses, and the approach adopted by the nursing profession in terms of who should perform this procedure and what the procedure entails.

4. Definitions

- 4.1 Peripheral Intravenous Cannula (PIVC) are specifically-designed flexible tubes designed for insertion into a blood vessel, with a proximal connector to allow injection or infusion of liquids. They are available in different sizes.



- 4.2 Intravenous Cannulation is an invasive procedure for insertion of a hollow fine bore tube into the venous system.
- 4.3 Healthcare Associated Infections (HCAIs) are infections resulting from medical care or treatment in hospital, which were not present or incubating prior to the medical care or treatment.

5. Policy

- 5.1 It is the policy of each health care institution MoH to ensure that registered nurses (RN) who have obtained the necessary education and training are enabled and facilitated to provide safe Peripheral Intravenous Cannulation.
- 5.2 Lapses of practice greater than six months require reporting to Directors/Heads of Nursing/ Supervisors/ Unit Heads and In-Charges. Therefore, updating can be provided by the accredited education provider.
- 5.3 All staff practicing this procedure will undergo formal update and refresher training every four years.
- 5.4 In the event of needle stick injury, nurses must follow the infection control and prevention manual.
- 5.5 Nurses who do not complete minimum of 10 successful peripheral cannulations within a timeframe of two months must retake the IV Therapy course.
- 5.6 Failure to successfully achieve the IV Therapy Program outcomes on two occasions results in non-acceptance of nurse in future IV Therapy programs.
- 5.7 A maximum of two unsuccessful attempts of peripheral cannulation on a patient will be allowed before making a referral to a more experienced practitioner.
- 5.8 All appropriate arrangements should be kept in place to support this policy regarding risk factors e.g. extravasation, phlebitis, risk of embolism and health care associated infection.



6. Procedure:

- 6.1 All nurses can access the procedure from the Nursing Lippincott Manual in the Al Shifa Health Information System under the heading IV cannulation. In case of unavailability of lippincott manual in Al Shifa, hard copy is available, and accessible.
- 6.2 The nurse shall follow Infection control measures (as per infection control policy) including hand hygiene, Personal Protective Equipment (PPE), careful disposal of sharps as significant measures to minimize risk to staff and patients.
- 6.3 Nurses will be trained by an approved education provider who will ensure training is provided by a registered practitioner in line with the DGNA Code of Professional Conduct (2011). The assessment result will be considered as an official documentation and considered as an evidence of an individual's competency.
- 6.4 Individual nurses that successfully demonstrate the achievement of the training program outcomes are eligible to practice the procedure.

7. Responsibilities

7.1 Directorate General of Nursing Affairs, MoH HQ

- 7.1.1 Facilitate communication related to policy implementation and evaluation with key stakeholders.
- 7.1.2 Monitor and evaluate policy implementation focusing on patient-centered care and safe and effective practice.

7.2 Director/ Head of Nursing Services

- 7.2.1 Is accountable for this policy by ensuring that it is carried out effectively.
- 7.2.2 Oversee the local control of and the implementation of the insertion of Peripheral Intravenous Cannula policy.
- 7.2.3 Monitor and follow up of the policy implementation within the Institution/ Governorate.
- 7.2.4 Facilitate and ensure the availability of resources required to implement the policy.

7.3 Unit Head and Nursing In-Charges in Health Care Institutions

- 7.3.1 Ensure all nurses in the unit have been trained in the stated procedure.
- 7.3.2 Monitor and follow up all nurses trained to ensure their competency



7.3.3 Responsible for rationalizing for additional training if required.

7.4 **Head of Professional Development**

7.4.1 Provide competency-based training for nurses that enable them to perform peripheral cannulation safely and effectively in clinical practice.

7.4.2 Ensure trainers are registered practitioners currently certified and competent in peripheral cannulation.

7.4.3 Ensure training is provided for nominated nurses that meet the inclusion criteria.

7.4.4 Develop transparent processes that enable nurses who are unsuccessful to re-take part of the training and assessment to enable them to demonstrate safe and effective practice.

7.4.5 Evaluate the quality of training programs and makes the required changes to improve the training curriculum.

7.5 **Staff Nurses**

7.5.1 Comply with this policy.

7.5.2 Only those nurses eligible to perform this procedure can do so.

7.5.3 Check the right patient/client gets the right treatment at the right time provided by the right person, who demonstrates safe and effective practice within a framework of patient safety and patient-centered care.

7.6 **Assessors:**

7.6.1 Assessors must be registered practitioners who are currently certified and competent in peripheral intravenous cannulation.

7.6.2 Ensure nurses perform the minimum standard of **10 safe and effective** Peripheral cannulations within a stated timeframe of **(two months)**.

7.6.3 Safeguard patients through the implementation of robust assessment processes and mark nurses unsuccessful if they do not achieve the stated learning outcomes.

7.6.4 Document along with the nurse participating in the training the outcomes of the participant's assessment.



8. Document History and Version Control

| Document History and Version Control | | | |
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| National IV Therapy Taskforce Member | DGNA Team | Dr. Majid Al Maqbali Director General of Nursing Affairs | |

9. Related Documents:

- 9.1 National Guard Health Affairs, Infection Prevention & control Manual, (2013) 2nded, Gulf Cooperation Council – Centre for Infection Control. Riyadh 11426, *Kingdom of Saudi Arabia* IV Cannulation Policy & Procedure.
- 9.2 ONMC, (2011) Code of Professional Conduct for Nurses in Oman. Lippincott's Nursing Procedures – IV Catheter Insertion.

**10. References:**

| Title of book/ journal/ articles/ Website | Author | Year of publication | Page |
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| Oman Nursing & Midwifery Council, Code of Professional Conduct for Nurses in Oman, Sultanate of Oman, <i>ONMC</i> | Oman Nursing & Midwifery Council | (2011). | |
| National Guard Health Affairs, Infection Prevention & control Manual, 2nded, Gulf Cooperation Council – Centre for Infection Control. Riyadh 11426, <i>Kingdom of Saudi Arabia</i> | National Guard Health Affairs, Riyadh | (2013) | |
| Directorate of Nursing Affairs, Intravenous Therapy Manual, Ministry of Health, <i>Sultanate of Oman</i> | Directorate of Nursing Affairs | (2006) | |