



Essential Nursing Care in Urinary Catheterization

Introduction

Urinary catheterization is a common procedure used in hospitals to drain urine from the bladder for diagnostic or therapeutic purposes. Approximately 15–25% of hospitalized patients require urinary catheterization during admission. Proper catheter care is essential to prevent complications such as catheter-associated urinary tract infection (CAUTI).

Nurses play a key role in safe catheter insertion, monitoring, documentation, and prevention of complications.

Learning Objectives

After completing this session, nurses should be able to:

1. Understand the types of urinary catheters
2. Identify indications and contraindications for catheterization
3. Recognize common complications
4. Apply safe catheter care practices
5. Perform proper documentation and monitoring

What is a Urinary Catheter?

A urinary catheter is a flexible tube inserted into the bladder to drain urine.

It may be used for:

- Monitoring urine output
- Relieving urinary retention
- Collecting sterile urine samples
- Managing urinary incontinence
- Supporting patients during surgery or critical illness

Types of Urinary Catheters

1. Intermittent Catheter

- Used for short-term bladder drainage
- Inserted and removed immediately after urine drainage

2. Indwelling Catheter (Foley Catheter)

- Remains in the bladder for continuous drainage
- Balloon keeps catheter in place

3. Suprapubic Catheter

- Inserted through an incision above the pubic bone
- Used when urethral catheterization is not possible

4. Condom Catheter

- External catheter used in male patients with urinary incontinence

Indications for Catheterization

Diagnostic Indications

- Monitor urine output
- Collect sterile urine samples
- Detect residual urine

Therapeutic Indications

- Acute urinary retention
- Neurogenic bladder
- Continuous bladder irrigation
- Intravesical drug therapy

Prophylactic Indications

- Before and during surgery
- Care of immobilized patients

Contraindications

Catheterization should be avoided in patients with:

- Suspected urethral injury
- Known urethral stricture
- Major abnormalities of lower urinary tract
- Latex allergy (if latex catheter is used)

Common Complications

Immediate Complications

- Pain or bladder spasm
- Hematuria
- Urethral trauma

Short-term Complications

- Urinary tract infection
- Urethritis
- Paraphimosis

Long-term Complications

- Chronic UTI
- Bladder stones
- Urethral erosion
- Catheter blockage

One of the most important complications is Catheter-Associated Urinary Tract Infection (CAUTI).

Prevention of CAUTI

Nurses should follow these principles:

- Use catheter only when necessary
- Maintain sterile technique during insertion
- Keep the closed drainage system intact
- Ensure unobstructed urine flow
- Maintain hand hygiene
- Remove catheter as soon as it is no longer needed

Nursing Preparation Before Catheterization

Before inserting a catheter, nurses should:

- Confirm indication for catheterization
- Explain the procedure to the patient
- Obtain consent
- Select appropriate catheter size and type
- Prepare sterile equipment
- Ensure patient privacy

Nursing Documentation

Proper documentation should include:

- Indication for catheterization
- Date and time of insertion
- Type and size of catheter
- Urine amount, color, and characteristics
- Any difficulties during insertion
- Patient condition after procedure
- Planned review or removal date

Ongoing Nursing Care

Nurses should regularly monitor:

- Urine output
- Urine color and clarity
- Catheter flow and blockage
- Signs of infection
- Patient comfort

Important practices:

- Keep urine bag below bladder level
- Avoid kinking of tubing
- Empty urine bag regularly
- Perform daily catheter hygiene

Normal Urine Output

Age Group	Normal Urine Output
Neonates	>2 ml/kg/hr
Infants	>1 ml/kg/hr
Children	>1 ml/kg/hr
Adults	>0.5 ml/kg/hr

Monitoring urine output is important for assessing kidney function and fluid balance.

Key Nursing Message – The 4 “R” Principles

Safe catheter care follows four key principles:

Right catheter
Right reason
Right care
Regular review

These principles help reduce complications and improve patient safety.

Conclusion

Urinary catheterization is a common nursing procedure but carries potential risks if not managed properly. Nurses play a critical role in ensuring appropriate catheter use, preventing infections, and monitoring patient outcomes. Continuous education and adherence to safe practices are essential to improve patient care.