Clinical Procedure for Management of Nephrostomy Tube Problems

Document Control:

For Use In:	Norfolk and Norwich University Hospitals (NNUH), James Paget University Hospital (JPUH) and The Queen Elizabeth Hospital King's Lynn (QEHKL)		
	All clinical areas		
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Document Author:	Mr Hany Hussein, Urology specialty doctor Miss Charlotte Dunford, Consultant urologist		
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Version History:

Version	Date	Author	Reason/Change
V.1	10/12/2019	Neil Burgess	To originate document
V1.1	27/07/2020	Melissa Gabriel	Monitoring compliance wording added.
V2	18/06/2024	Hany Hussein	Pathway for patients needing urgent nephrostomy repositioning/re-insertion added. Reformatting as per new trust template requirements.

Previous Titles for this Document:

Previous Title/Amalgamated Titles	Date Revised
None	Not applicable

Distribution Control

Printed copies of this document should be considered out of date. The most up to date version is available from the Trust Intranet.

Consultation

The following were consulted during the development of this document:

- Miss Charlotte Dunford, Consultant Urologist (NNUH)
- Mr. William Finch, Consultant Urologist (NNUH)
- Mr. Petre Ilie, Consultant Urologist (QEHKL)
- Mr. David Manson-Bahr, Consultant Urologist (JPUH)

Monitoring and Review of Procedural Document

The document owner is responsible for monitoring and reviewing the effectiveness of this Procedural Document. This review is continuous however as a minimum will be achieved at the point this procedural document requires a review e.g. changes in legislation, findings from incidents or document expiry.

Relationship of this document to other procedural documents

This document is a clinical guideline applicable to Norfolk and Norwich University Hospitals (NNUH), James Paget University Hospital (JPUH) and The Queen Elizabeth Hospital King's Lynn (QEHKL); please refer to local Trust's procedural documents for further guidance.

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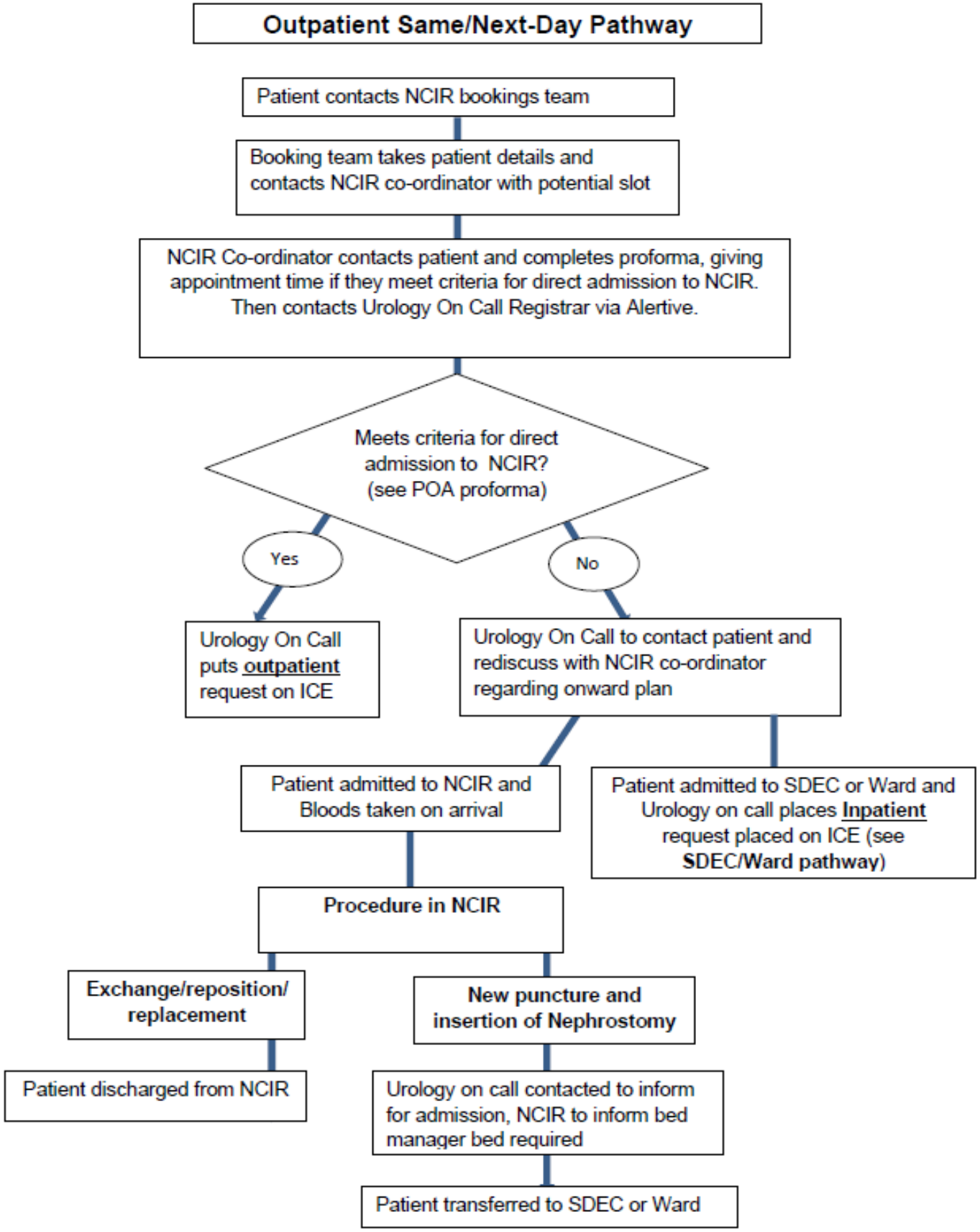
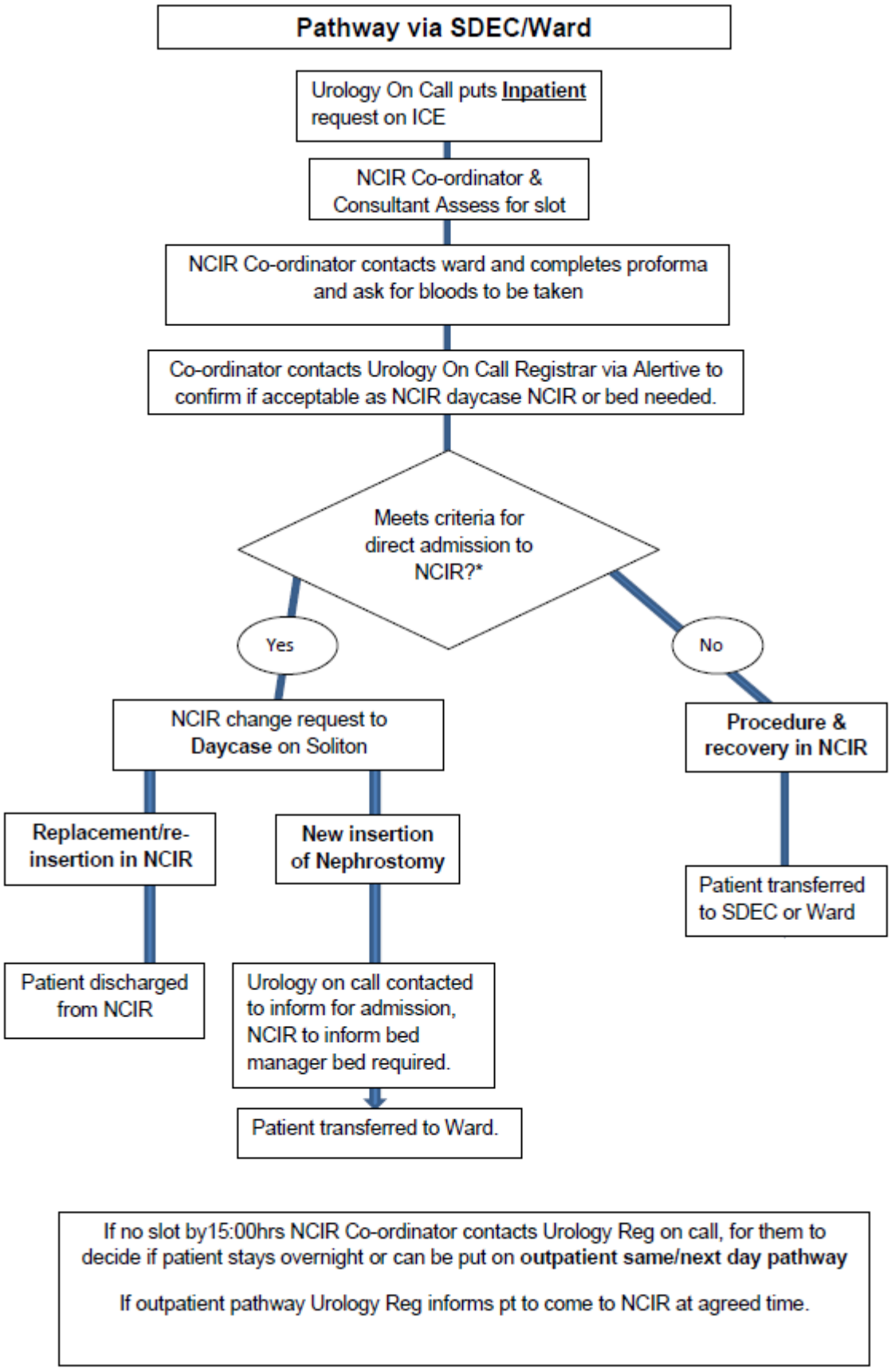
Quick reference - Pathway for patients needing urgent nephrostomy repositioning/re-insertion.




Pathway via SDEC/Ward
Urology On Call puts Inpatient request on ICE
NCIR Co-ordinator & Consultant Assess for slot
NCIR Co-ordinator contacts ward and completes proforma and ask for bloods to be taken
Co-ordinator contacts Urology On Call Registrar via Alertive to confirm if acceptable as NCIR daycase NCIR or bed needed.
Meets criteria for direct admission to NCIR?*
Yes
No
NCIR change request to Daycase on Soliton
Procedure & recovery in NCIR
Replacement/re-insertion in NCIR
New insertion of Nephrostomy
Patient transferred to SDEC or Ward
Patient discharged from NCIR
Urology on call contacted to inform for admission, NCIR to inform bed manager bed required.
Patient transferred to Ward.
If no slot by15:00hrs NCIR Co-ordinator contacts Urology Reg on call, for them to decide if patient stays overnight or can be put on outpatient same/next day pathway
If outpatient pathway Urology Reg informs pt to come to NCIR at agreed time.

1. Introduction

1.1. Rationale

Nephrostomy tube placement is a common procedure performed to alleviate urinary obstruction, typically caused by conditions such as kidney stones, tumours, or ureteral strictures. While nephrostomy tubes effectively drain urine from the renal pelvis to an external collection bag, they can sometimes encounter complications like blockage, leaking or dislodgement that necessitate prompt intervention.

https://www.baus.org.uk/_userfiles/pages/files/Patients/Leaflets/Percutaneous%20nephrostomy.pdf

1.2. Objective

This guidance has been developed to provide healthcare providers with a systematic, structured approach to identifying, assessing, and managing nephrostomy tube-related complications. It aligns with current evidence-based clinical practices and aims to enhance patient safety and improve overall outcomes.

1.3. Scope

This guidance applies to all adult patients over the age of 18 who experience complications related to nephrostomy tubes, including issues such as leakage, blockage, or accidental dislodgement.

1.4. Glossary

The following terms and abbreviations have been used within this document:

Term	Definition
KUB	Kidney, ureter, and bladder
FBC	Full blood count
U&Es	Urea & electrolytes
CRP	C-reactive protein
C&S	Culture and sensitivity
MSU	Mid-stream urine
NCIR	Norfolk Centre for Interventional Radiology

2. Responsibilities

All medical staff and allied healthcare professionals involved in the care of patients with nephrostomy tube related complications should be aware of the recommendations contained in this guidance. Staff must always ensure they have appropriate training and gained the necessary competencies before undertaking invasive procedures.

3. Policy Principles

3.1. Assessment

Patients discharged home with a nephrostomy tube in place can develop certain problems prompting emergency admission to urology as outlined below:

- Assessment of nephrostomy tube problems is crucial for identifying complications early and implementing appropriate interventions. The

assessment should be systematic and comprehensive, encompassing various aspects related to the nephrostomy tube and the patient's clinical status.

3.1.1. History

Obtain a detailed history, including the indication for nephrostomy tube placement, any underlying conditions (e.g., kidney stones, tumours), previous procedures, and any recent changes in symptoms or drainage characteristics.

3.1.2. Examination

- **Tube insertion site:** Inspect the nephrostomy tube insertion site for signs of infection, such as erythema, warmth, tenderness, or purulent drainage.
- **Peri-tubal skin:** Assess the skin around the tube for irritation, excoriation, or signs of skin breakdown.
- **Urine output:** Measure and document urine output from the nephrostomy tube over a specified period, noting any changes in volume or characteristics (e.g., colour, clarity).
- **Palpation:** Palpate the abdomen for tenderness, distension, or signs of fluid collection.

3.1.3. Investigations

1.1.1.1. Laboratory

- **Urinalysis:** Perform urinalysis to assess for signs of infection (e.g., pyuria, bacteriuria) or urinary tract stones.
- **Blood Tests:** Consider obtaining blood tests (e.g., complete blood count, renal function tests) to assess for systemic complications or electrolyte abnormalities.

1.1.1.2. Imaging

- **Ultrasound:** Consider performing ultrasound to evaluate the kidneys, renal pelvis, and nephrostomy tube placement.
- **X-ray:** Order a kidney-ureter-bladder (KUB) X-ray to assess nephrostomy tube position, integrity, and any associated complications (e.g., dislodgement, malposition).

3.2. Management

3.2.1. Nephrostomy tube not draining / leaking urine.

- Check if kink in nephrostomy tube (if severe may need replacing).
- Try flushing with 10mls of saline via nephrostomy tube.
- Arrange X Ray KUB to check tube position and urine / blood tests as above.
- If unable to flush / establish drainage requests a nephrostogram +/- tube replacement on ICE and discuss with the interventional radiology unit (IRU) on the telephone.

3.2.2. Nephrostomy tube has fallen out.

- Request nephrostomy tube replacement on ICE and discuss with IRU on the telephone.
- Urine and blood tests as above.

3.2.3. Patient has developed infection.

- Oral antibiotics if no systemic features of infection.
- If systemically unwell or signs of sepsis, follow SEPSIS 6 and administer intravenous antibiotics according to Trust guidelines.
- Intravenous fluids until patient improving and taking a sufficient oral intake.
- Analgesia:
  - Regular IV Paracetamol.
  - As required NSAID per rectum e.g. Diclofenac.
  - Supplemented with an oral opiate or parenteral if vomiting.
- Anti-emetic.

3.3. Follow Up

- In patients with long term nephrostomy ensure that date for next exchange of nephrostomy tube has been requested with the interventional radiology unit prior to discharge.
- In patients with a nephrostomy tube who are awaiting ureteric stone surgery please inform senior stone surgeons of this emergency admission as this will influence scheduled elective surgery date.

4. Monitoring Compliance

To ensure that this document is compliant with the above standards any adverse outcomes will be entered onto Datix and reviewed by the Departmental Governance Team who will ensure that these are investigated and are discussed at relevant governance meetings to review the results and make recommendations for further action.

5. Appendices

There are no appendices for this document.

6. Equality Impact Assessment (EIA)

Type of function or policy	Existing

Division	Surgical	**Department**	Urology
Name of person completing form	Hany Hussein	**Date**	18/06/2024

Equality Area	**Potential Negative Impact**	**Impact Positive Impact**	**Which groups are affected**	**Full Impact Assessment Required YES/NO**
Race	None	None	NA	NO
Pregnancy & Maternity	None	None	NA	NO
Disability	None	None	NA	NO
Religion and beliefs	None	None	NA	NO
Sex	None	None	NA	NO
Gender reassignment	None	None	NA	NO
Sexual Orientation	None	None	NA	NO
Age	None	None	NA	NO
Marriage & Civil Partnership	None	None	NA	NO
EDS2 – How does this change impact the Equality and Diversity Strategic plan (contact HR or see EDS2 plan)?				

- **A full assessment will only be required if: The impact is potentially discriminatory under the general equality duty**
- **Any groups of patients/staff/visitors or communities could be potentially disadvantaged by the policy or function/service**
- **The policy or function/service is assessed to be of high significance**

IF IN DOUBT A FULL IMPACT ASSESSMENT FORM IS REQUIRED

The review of the existing policy re-affirms the rights of all groups and clarifies the individual, managerial and organisational responsibilities in line with statutory and best practice guidance.