

Facebook Live

Tuesday 17 May 19:30 - 20:30

PERCUTANEOUS NEPHROSTOMY - OPTIMISING CARE FOR PATIENTS

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Presented by



LIVE Q&A

Comments



Submit your questions through the comment section of the live broadcast!



Learning objectives

At the end of this session you will understand:

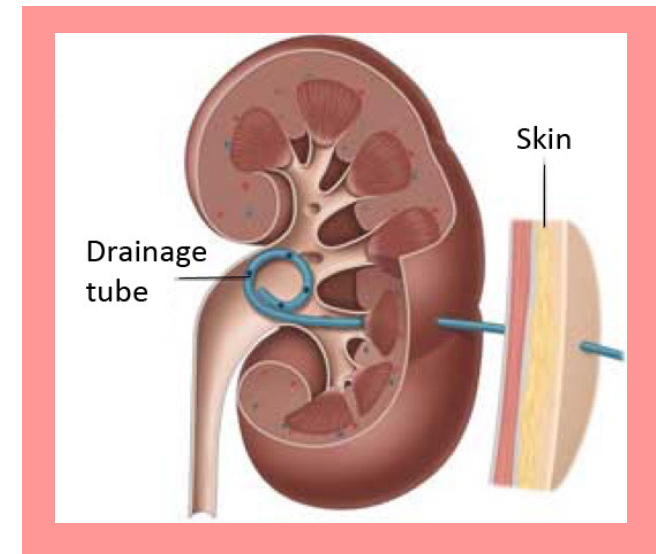
- What a percutaneous nephrostomy is, and the types of nephrostomy tubes/drainage bags used
- Possible complications of the procedure
- Care of a patient with a nephrostomy
- Why and how a working group was established
- Resulting changes in practice and their impact on healthcare professionals and patients.

What is a percutaneous nephrostomy?

- A nephrostomy tube is a narrow-gauge pigtail drain inserted into the renal pelvis for the purpose of draining urine
- The percutaneous nephrostomy tube diverts urine away from the ureter and bladder into an external drainage bag (Wildberger and Günther, 2010)
- It is usually inserted by an interventional radiologist under direct vision using fluoroscopy, ultrasound or computerised tomography (CT) guidance, whilst using local anaesthetic and often with sedation.

The nephrostomy tube

- Percutaneous nephrostomy tubes are sterile drainage devices
- Associated with serious risks
- 1 in 100 patients are at risk of developing a serious infection and 2 in 1000 patients are at risk of death (Koukounaras and Lyon, 2017)
- All healthcare professionals must ensure appropriate measures are taken to minimise associated risks to the patient.

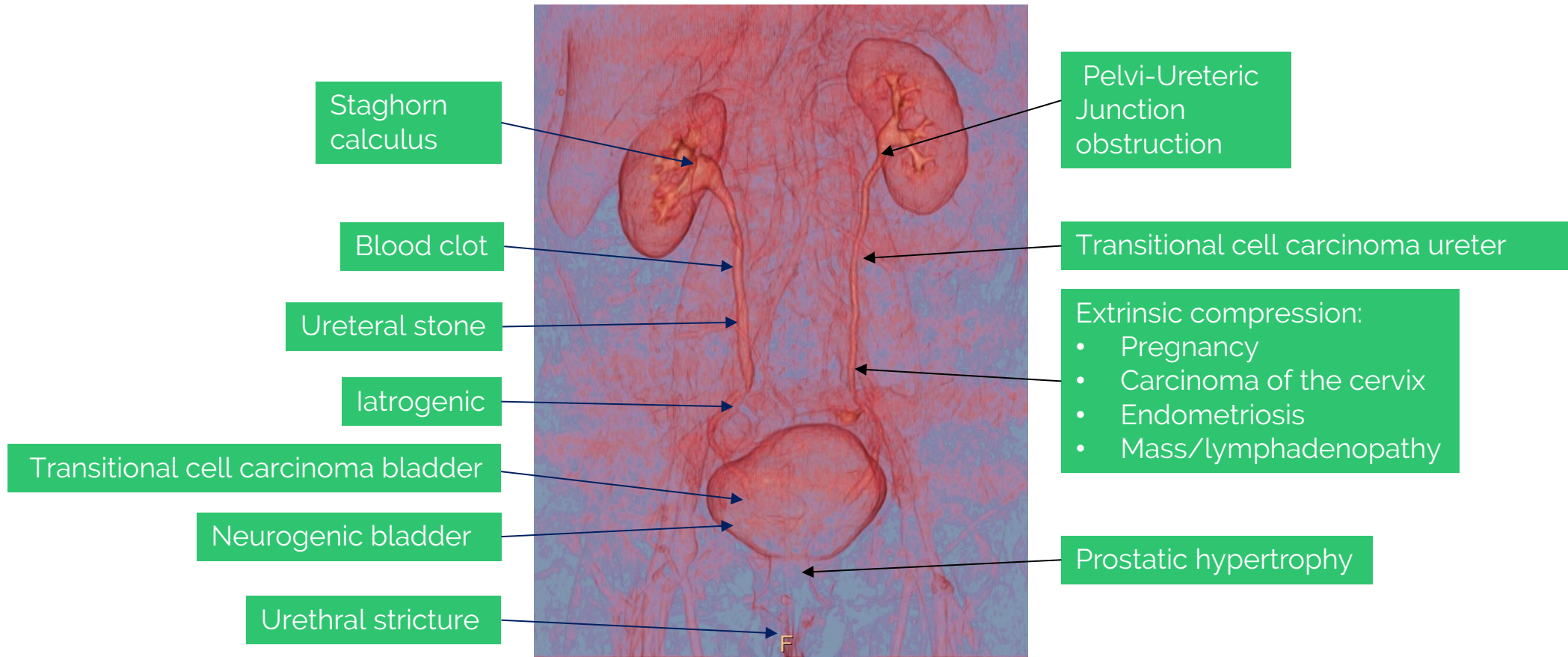


Picture used with permission from BAUS

Why is a nephrostomy tube inserted?

- The most common reason for requiring a percutaneous nephrostomy tube is a blockage or damage between the kidneys, ureters and bladder
- To decompress an obstructed kidney
- To reduce the flow of urine into the ureter in cases of ureteric injury
- Following antegrade ureteric stent placement in the radiology department
- Following percutaneous stone extraction in urology theatres.

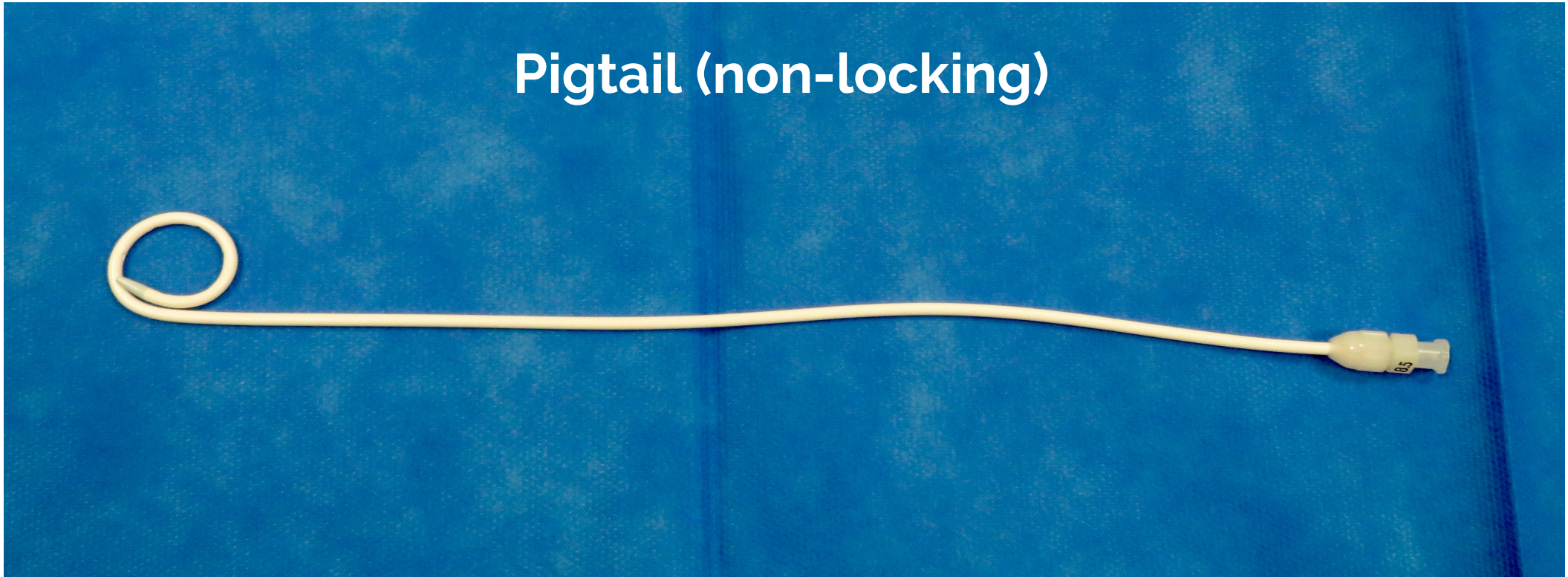
Causes of an obstructed kidney



Picture used with permission from Dr M Collins

Types of nephrostomy tubes

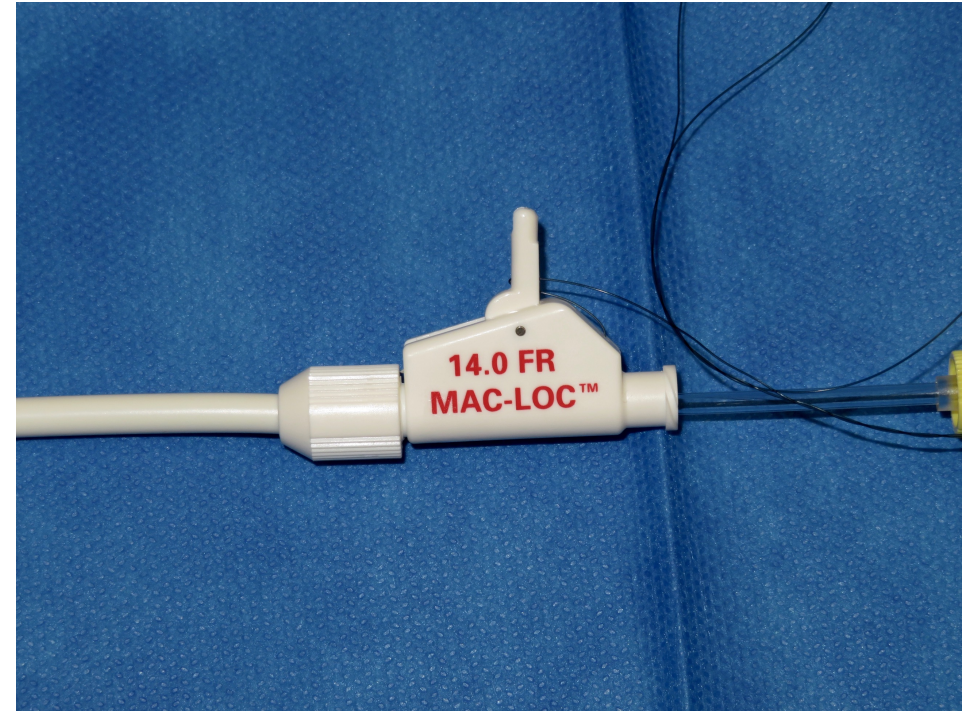
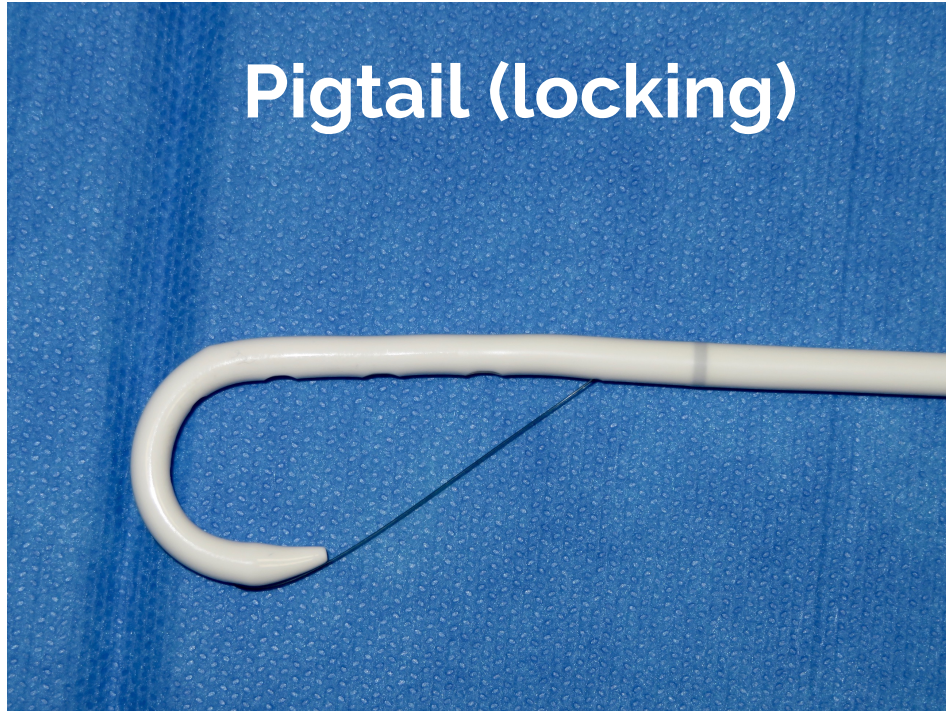
Pigtail (non-locking)



Pictures used with permission from Dr M Collins

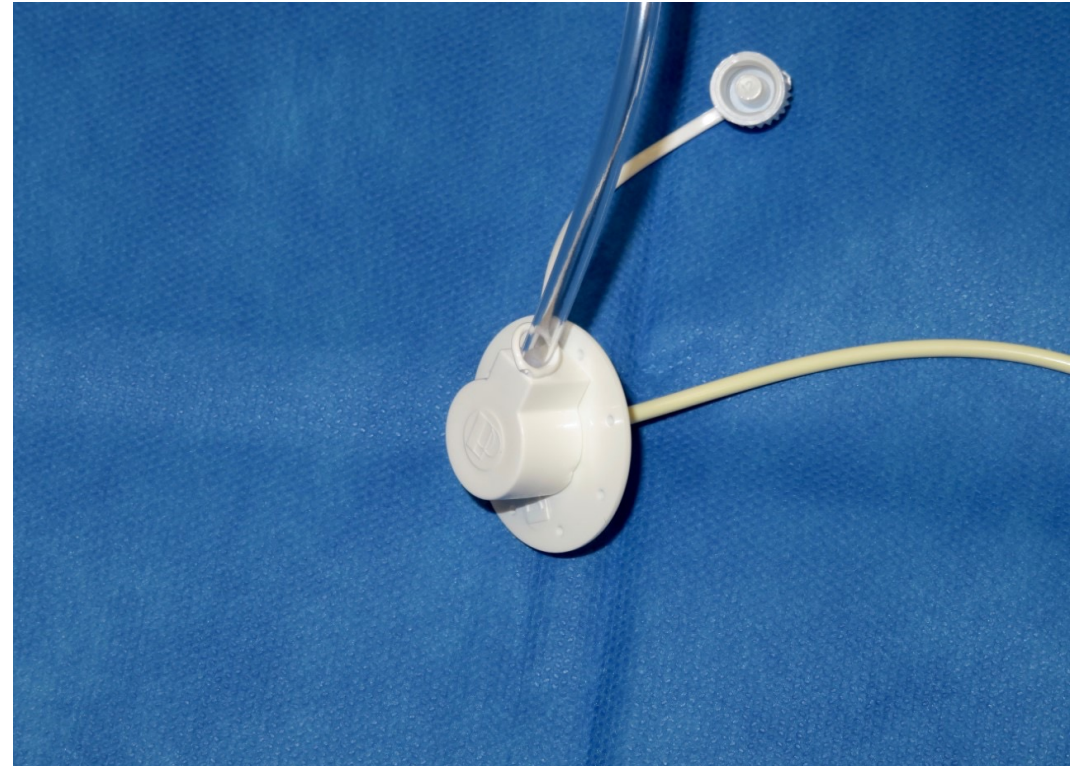
Types of nephrostomy tubes

Pigtail (locking)



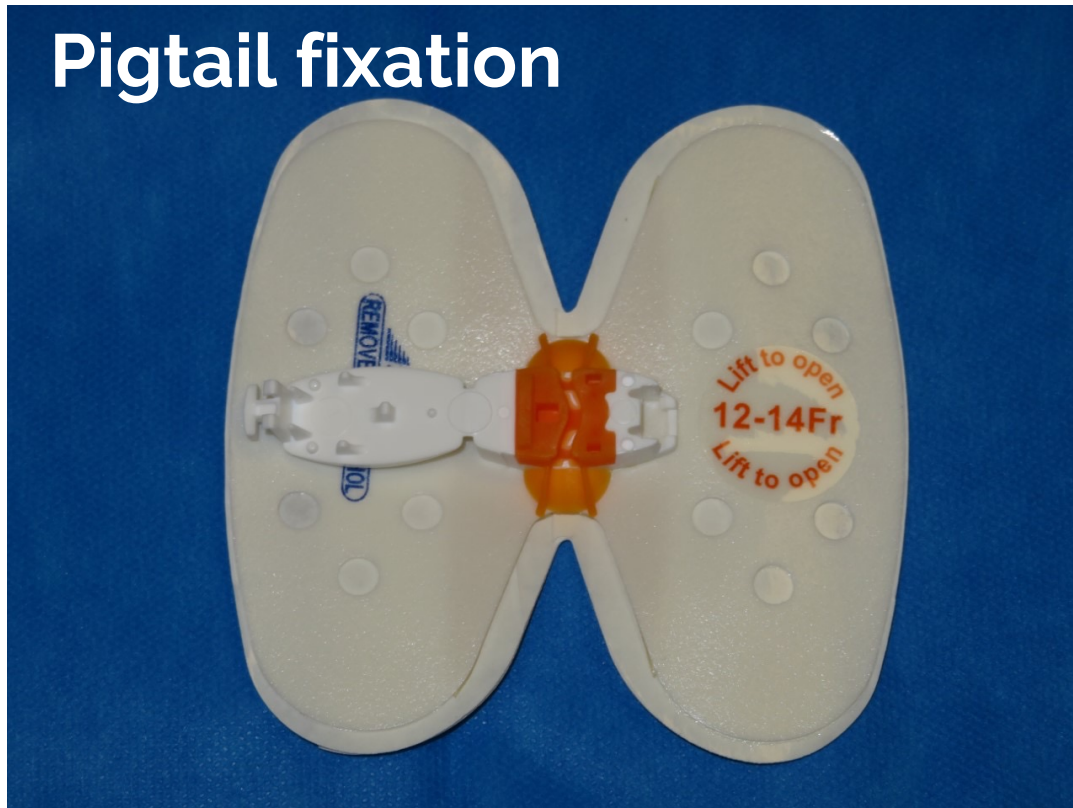
Pictures used with permission from Dr M Collins

Types of nephrostomy tubes



Fixation and drainage bag

Pigtail fixation



Pictures used with permission from Dr M Collins

Insertion: possible complications

- Sepsis
- Haemorrhage including subcapsular haematoma and pseudoaneurysm
- Pneumothorax
- Puncture of adjacent organs
- Urine leak/urinoma
- Death.

Possible post procedural complications

- **Sepsis:** rigors, fever, signs of septic shock
- **Bleeding:** heavily bloodstained urine or frank blood in the drainage tube (the urine is often slightly bloodstained after the procedure, but this normally settles quickly)
- **Increasing pain:** haemodynamic instability, excessive bleeding around the insertion site
- **Tube blockage:** absent urine drainage into the drainage bag, increasing pain in the flank, deteriorating renal function (look for signs of kinking of the nephrostomy tube)
- **Tube displacement:** absence of urine drainage, increasing pain in flank, worsening renal function. Visible tube markers or holes on inspection.

Post operative care plan

EXPECTED OUTCOME:	PLAN OF CARE:	DATE	TIME	SIGN.
<p>To maintain patient safety and comfort following insertion of nephrostomy tube.</p> <p>Post op:</p> <p>BP</p> <p>HR</p> <p>Sats</p> <p>Resps</p> <p>Temp</p> <p><u>N.B.</u> IF PATIENT IS GOING HOME WITH A NEPHROSTOMY INSITU: PLEASE ENSURE THE REFERRAL TO BULLEN HEALTH CARE IS COMPLETED.</p>	<p>1. Monitor and record blood pressure, pulse rate, respiratory rate and temperature:</p> <p>½ hourly for 2 hours hourly for 2 hours 2 hourly for 4 hours then 4 hourly.</p> <p>OBSERVE FOR SIGNS OF SEPSIS</p> <p>2. Record details of nephrostomy drainage system :</p> <p>Type of drain :</p> <p>Size of drain :</p> <p>Exit site :</p> <p>3. Observe drainage exit site(s) for any signs of bleeding, oozing, swelling or redness.</p> <p>4. Monitor and record urine output on fluid balance chart and closely monitor any haematuria.</p> <p>5. Monitor and observe for signs of pain and administer analgesia as prescribed.</p> <p>6. Ensure drainage bag(s) remains below exit point to facilitate urine drainage.</p> <p>7. Ensure comfortable environment and that nurse call button is available.</p> <p>8. Patient may eat and drink normally.</p> <p>9. Nurse on bed rest for 4 Hours</p> <p>10. Report any abnormalities to the appropriate Consultant Radiologist or nurse in charge.</p> <p>N.B. If ureteric stent is inserted and nephrostomy drain is removed, please monitor vital signs as above.</p>			

Nephrostomy drainage bags

- Nephrostomy drainage bags supplied in hospital vary
- Some are not widely available in the community (often, not designed to be comfortable body-worn products)
- An example of a comfortable body-worn product is the Manfred Sauer NephSys drainage system
- Manfred Sauer NephSys is available on an FP10 community prescription.

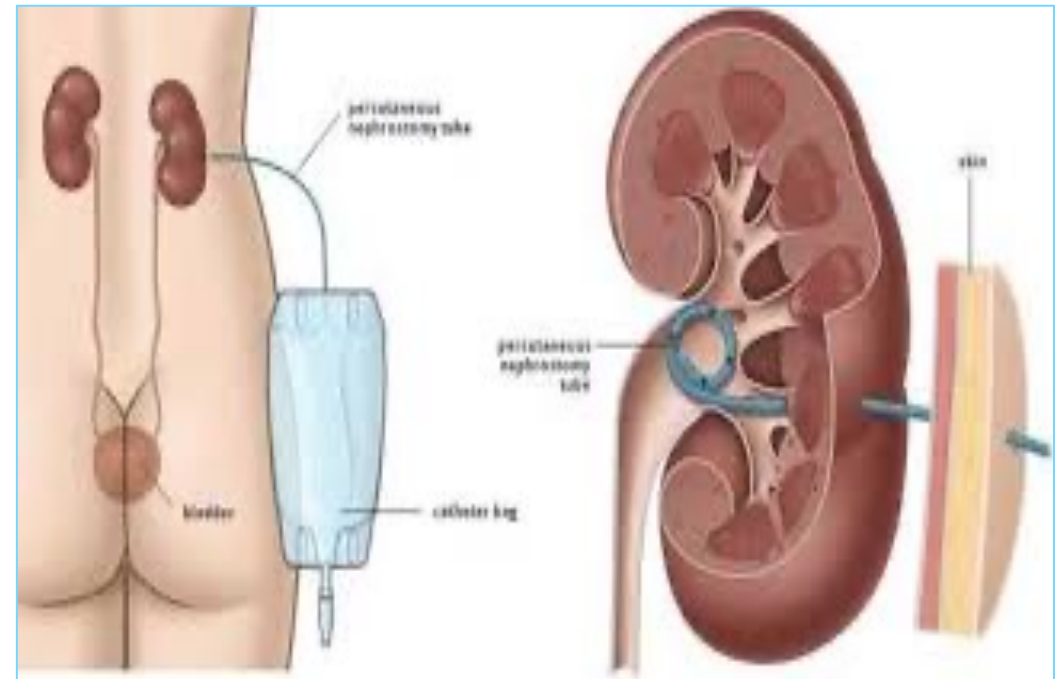
Manfred Sauer NephSys drainage system



Establishment of working group

A working group was formed following two serious incidents relating to nephrostomy devices:

- Review current practice
- Formulate nephrostomy policy
- Develop database
- Process mapping
- Current pathway
- Ideal pathway.



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Areas of concern

Tracking of patients following nephrostomy insertion.

Lack of knowledge and confidence in managing and implementing nephrostomy care.

No contact information.

Variation in nephrostomy education given to patient.

No direct access to support and services.

No ownership of cohort of patient - not all urology patients.

Poor experience by patient.

Inadequate standards of care given.

Poor discharge to community services.

Nephrostomy working group: multi-disciplinary approach



Programme Partner – Continuous Quality Improvement Team



Representation/Key members



Interventional radiology, renal, community, SEU, oncology



Additional support: Medical illustration, ratification team, infection prevention team



Change in services: hot clinics

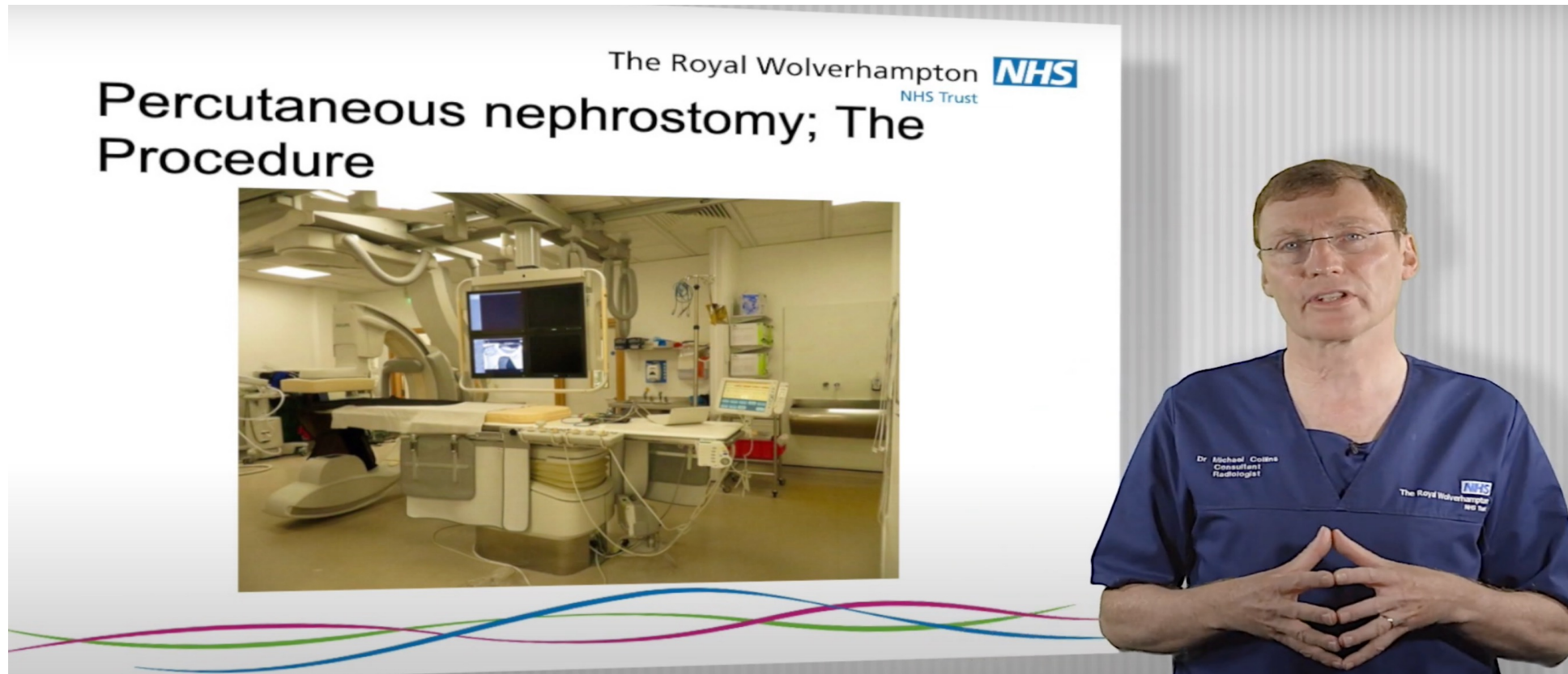
Referrals:

- Made to urology clinical nurse specialist (CNS) team from healthcare professionals
- Patients self-refer if unable to resolve their problem with their district nurse/practice nurse or ward staff
- The urology team
- Offer verbal advice
- Face-to-face clinic with the urology CNS team if required
- Arrange direct admission to the surgical emergency unit.

The nephrostomy hub

- Over the past year the team has produced a series of resources that are now available on the nephrostomy hub
- The work to produce these resources has been phenomenal and the multi-disciplinary approach and commitment by the team has resulted in the success of this project
- The nephrostomy hub aims to give healthcare professionals access to a range of resources and information to enable them to provide optimal care and support for patients.

Educational video: nephrostomy overview



<https://youtu.be/TRfgvwyrwco>

Picture used with permission from Dr M Collins

Nursing Clinical Procedures (NCPs)

- NCP: changing a nephrostomy bag
- NCP: changing a nephrostomy dressing
- NCP: flushing a nephrostomy tube (adult)
- Competencies assessment tool attached to each procedure.

Clinical Procedures
for **Safer Patient Care**

Clinical education



If you cannot see this video, [watch it on YouTube](#)

Changing a Nephrostomy Dressing



If you cannot see this video, [watch it on YouTube](#)

Flushing a Nephrostomy Tube



https://youtu.be/fVi_gfJWxM8

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Trouble shooting chart



The Royal Wolverhampton
NHS Trust

Nephrostomy Troubleshooting Chart

Problem Blood in the urine	Possible Cause <ul style="list-style-type: none"> Blocked nephrostomy tube Kidney infection 	Action <ul style="list-style-type: none"> If appropriate, encourage the patient to increase fluid intake Monitor input and output from nephrostomy tube and bladder Ensure clinical procedures following ANTT are used when changing dressings and bags Ensure drainage bag is supported and correct dressing is intact Send urine for C&S Consult with medical team if infection suspected, as patient may require antibiotics Consider flushing the tube only if no evidence of infection (must be trained staff only following clinical procedure)
Problem Pain over site where nephrostomy tube enters skin	Possible Cause <ul style="list-style-type: none"> Urine or site infection Bag not supported correctly so pulling tube Is patient undertaking too much exercise or manual labour? 	Action <ul style="list-style-type: none"> If patient is symptomatic (shivering / temperature) consult with medical team as patient may need to be prescribed antibiotics Ensure drainage bag is supported and correct dressing is intact Advise patient to rest and light exercise only
Problem Nephrostomy tube falls out	Possible Cause <ul style="list-style-type: none"> Has nephrostomy tube or drainage bag been pulled? 	Action <ul style="list-style-type: none"> Inform urology CNS or Surgical Emergency Unit (SEU) who will inform urology Consultant and arrange admission to SEU as appropriate
Problem Patient is feeling unwell or symptoms of an infection	Possible Cause <ul style="list-style-type: none"> Infection of kidney or bladder? 	Action <ul style="list-style-type: none"> Ensure clinical procedures following ANTT is used when changing dressings and bags If appropriate, encourage the patient to increase fluid intake Monitor input and output from nephrostomy tube and bladder Send urine for C&S Consult with medical team if infection suspected as patient may require antibiotics Discuss with medical team as patient may need admitting
Problem Urine leaking from around nephrostomy tube	Possible Cause <ul style="list-style-type: none"> Bypassing due to kinked tube or blocked tube 	Action <ul style="list-style-type: none"> Check for any kinking, dislodgment or blockage of the nephrostomy tube. Reposition tube as appropriate Ensure drainage bag is supported and correct dressing is intact Check sutures are still intact Monitor input and output from nephrostomy tube and bladder If appears blocked consider flushing the tube only if no evidence of infection (must be trained staff only following clinical procedure)

Trouble shooting chart

Problem Skin around site is nodular, red and sore. Sometimes bleeds	Possible Cause <ul style="list-style-type: none"> Over granulation 	Action <ul style="list-style-type: none"> If required request medical illustration to take photo of area with patients consent. Contact Tissue Viability (TV) team for advice. Consider silver nitrate treatment under guidance of urology Consultant and TV team
Problem Reduced / No urine output	Possible Cause <ul style="list-style-type: none"> Nephrostomy bag tap left open / nephrostomy tube kinked Is the patient drinking enough? Has urine output from bladder increased? Is the nephrostomy tube blocked? 	Action <ul style="list-style-type: none"> Check for any kinking of the tube. Ensure the nephrostomy tap has not been left open If appropriate encourage fluid intake Monitor input and output from nephrostomy tube and bladder If appears blocked consider flushing the tube only if no evidence of infection (must be trained staff only following clinical procedure) Consider checking U+E's
Problem Nephrostomy insertion site and surrounding area is red, swollen, signs of oozing and warm to touch	Possible Cause <ul style="list-style-type: none"> Infection at the site of the nephrostomy tube 	Action <ul style="list-style-type: none"> Swab site If required request medical illustration to take photo of area with patients consent. If required contact Tissue Viability (TV) team for advice. Ensure clinical procedure following ANTT are used when changing dressings and bags If patient is symptomatic (shivering / temperature) consult with medical team as patient will need to be prescribed antibiotics

This chart is to be used to support health care professionals with managing nephrostomy problems.

This flow chart is for guidance only and each episode of care must be managed on the patients individual circumstance, your own assessment, clinical skills and knowledge. You must be aware of your own limitations and refer for further advice and support wherever necessary.

Contacts: Urology CNS – 01902 694048 or 01902 694467 (office hours 8:00am–4:00pm Monday–Friday)
SEU (outside office hours) – 01902 694004

Adapted from 'My Nephrostomy Passport - How to look after your nephrostomy tube' Manfred Sauer UK Limited.

Safe & Effective | Kind & Caring | Exceeding Expectation

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Nephrostomy discharge form

Nephrostomy discharge form

Referring ward / department:

Patients Consultant: _____

Speciality: _____

Reason for insertion of nephrostomy: _____

Date of removal or exchange if known: _____

Has the patient got capacity: ☐ Yes ☐ No

Does the patient speak English: ☐ Yes ☐ No

Actions before discharge	Yes	No	Variance / reason:	Initials
Nephrostomy care leaflet given to patient.				
Bullen delivery service referral made (emailed).				
Referral made to district nurse or practice nurse for weekly bag and dressing changes. (Please state which team or practice)				
Nephrostomy care explained to patient.				
Appropriate nephrostomy equipment / dressings given to patient.				
Inform patient of appropriate contact details for specialist teams to contact for advice. Contact details documented on last page of nephrostomy leaflet.				
This form scanned into Clinical Web Portal and emailed to 'out of area' district nurse / practice nurse team once completed with any appropriate care plans.				

Other comments: _____

Signature: _____ Designation: _____

Date: _____ Stamp: _____

Home delivery form

Patient details

Name	
Date of Birth	/ /
Address	
Post Code	
Telephone	
Mobile	

GP details

Doctor	
Surgery	
Address	
Post Code	
Telephone	
Fax	

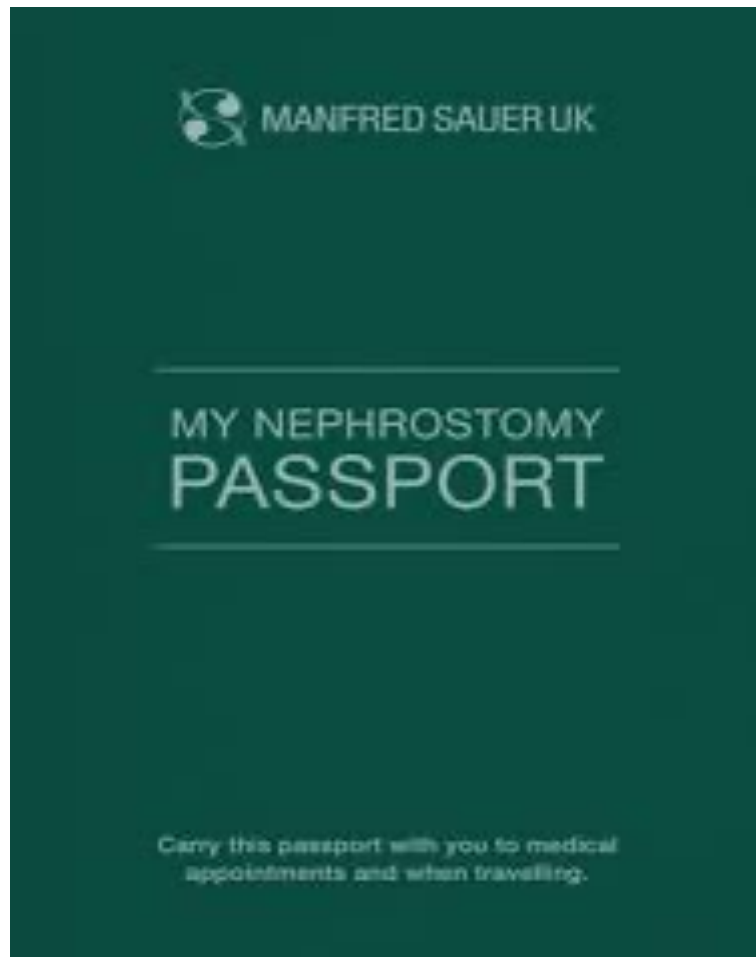
Product	Code	Quantity
LINC Medical Night Drainage Bag	LM2LS	x30 bags
Nephsys Set	NEPHSYS.025	1 set
Nephsys Bags 20 cm	NS721.1720S	x1 pack of ten

Comments

PLEASE SEND A COMPLIMENTARY NIGHT STAND

If you require any clinical advice or assistance please contact your Urology Nurse Practitioner.

Nephrostomy passport and referral



Patient Clinical Referral Form		MANFRED SAUER CARE NHS Prescription Dispensing Service	
(Please complete in full with as much detail as possible)			
Manfred Sauer Care Nurse: <input type="text"/>			
Contact Number: <input type="text"/>			
Manfred Sauer Care Nurse Email address: (Secure referral pathway) <input type="text"/>			
Referrer Details:		Date of Referral: <input type="text"/>	
Name: <input type="text"/>		Job Title: <input type="text"/>	
Contact Number: <input type="text"/>			
Address for feedback: <input type="text"/>			
Postcode: <input type="text"/>			
Patient Details:		GP Details:	
Name: <input type="text"/>		GP Name: <input type="text"/>	
Address: <input type="text"/>		Surgery Address: <input type="text"/>	
Postcode: <input type="text"/>		Postcode: <input type="text"/>	
Telephone Number: <input type="text"/>		Telephone Number: <input type="text"/>	
Mobile: <input type="text"/>		Is the GP aware of the referral? YES <input type="checkbox"/> NO <input type="checkbox"/>	
Date of Birth: <input type="text"/>		Is a joint visit required? YES <input type="checkbox"/> NO <input type="checkbox"/>	
NHS number: <input type="text"/>		If YES, who with? <input type="text"/>	
Reason for referral: <input type="text"/>		Relevant past medical/surgical history: <input type="text"/>	
Medication: <input type="text"/>		Any other information relevant to this referral: <input type="text"/>	
For office use only:			
Date referral received: <input type="text"/>		Date patient contacted: <input type="text"/>	
Agreed appointment date: <input type="text"/>			
All information will remain confidential and patient information stored in accordance with GDPR regulations. If you receive this form in error, please inform the relevant nurse immediately and shred this form.			

Nephrostomy hub



Links for help and
support



Key care points



Contact details for
acute and
community

Impact: healthcare professionals

The nephrostomy hub has enabled staff who may have previously lacked confidence or knowledge to feel supported. It has empowered healthcare professionals knowing that correct discharge planning is in place and access to specialist support is available if any problems should occur.

Impact: healthcare professionals

The hub provides all necessary resources and links to increase awareness and understanding of how to care for patients with a percutaneous nephrostomy in situ, signpost them to available resources, support competency development and support better outcomes for patients.

Impact: patients

It was so easy to access services and to receive specialist care to address my problem promptly. I cannot thank the specialist nurse enough.

Impact: patients

I have previously spent many hours in the emergency department with blockages. This new service allows me to make contact and see the specialist nurses directly to manage my nephrostomy problems if needed.

What next?



Promote and
share work



Utilise
resources



Audit practice



Publication

Conclusion

- All healthcare professionals should be committed to prevent avoidable harm, to minimise associated risks to patients who require a percutaneous nephrostomy
- There is a requirement to provide necessary resources and to increase awareness and understanding of how to care for patients with a percutaneous nephrostomy
- Patients should be able to have access to specialist support, advice and treatment inline with stoma care in both acute and community setting.

Striving to improve and optimise the provision of care nationally results in better outcomes for patients.

Further reading and education

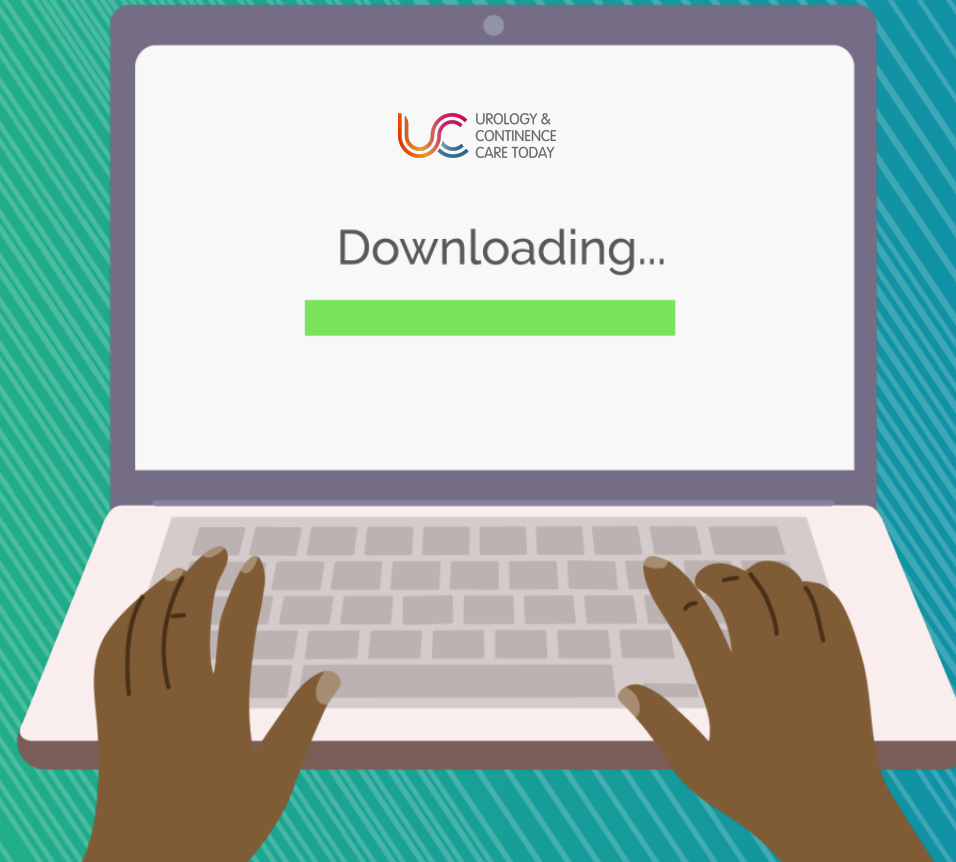
Dougherty L, Lister S (2015) The Royal Marsden Manual of Clinical Nursing Procedures

Martin R, Baker H (2019) Nursing care and management of patients with a nephrostomy. *Nurs Times* [online] **115(11)**: 40-43

 Care of the pigtail nephrostomy catheter eLearning course (members only)

Call to action

- For more information or to request samples of the Manfred Sauer NephSys nephrostomy system please contact our helpline on **01604 595 696** or **helpline@manfred-sauer.co.uk** or visit our website www.manfred-sauer.co.uk
- Our NephSys fitting instruction video can be found on YouTube www.youtube.com/watch?v=DxR_5i-gOMQ.



www.ucct-live.co.uk/certificate



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