

# Experience of introducing the UroLift System to the Urological Investigations Unit

Nicolas Bryan

Urology Diagnostic Unit (UDU), Calderdale and  
Huddersfield NHS Foundation Trust

This article is sponsored by Teleflex

## Aims

- Increase efficiency in the pathway of care for BPH patients and reduce waiting times

## Objectives

- Create an ambulatory service for the UroLift System in the *Urological Investigations Unit*
- Offer the UroLift System to clinically suitable patients as an alternative to TURP
- Reduce follow-up appointments

## Context

Calderdale and Huddersfield NHS Trust (CHFT) serves a local population of around 475,000. This represents an aging population, with a growing number of people over the age of 65 years. These patients often have more complex health needs, often with multiple long-term conditions, which place greater demands on health and social care services.

Benign prostatic hyperplasia (BPH) is a condition primarily affecting older men, and the prevalence increases with age.<sup>1</sup> With the aging population, our Trust has seen an increase in patients requiring surgery to treat their BPH. Pressures on theatre lists and inpatient beds created by the Covid-19 pandemic means we are having to find new, more efficient, ways of working to address the growing waiting list of patients needing care. In particular, we needed to look at resource and space-efficient solutions that enable us to treat patients away from main theatres and without the need for an overnight bed.

Amongst its recommended actions for the admitted waiting list, GIRFT recommends maximising the “*Right procedure Right place*” – moving appropriate procedures into procedure rooms, and away from higher resource environments.<sup>2</sup> Aligned with this latest guidance, GIRFT also recommends that secondary care providers increase the provision of *Urological Investigations Units* (UIUs), providing a dedicated resource for urological outpatient care.<sup>3</sup>

CHFT started offering the UroLift System to patients with lower urinary track symptoms (LUTS) from BPH in 2021. The UroLift System is a minimally-invasive surgical treatment (MIST) for BPH, which is recommended by NICE as a day case or outpatient alternative to transurethral resection of the prostate (TURP) and holmium laser enucleation of the prostate (HoLEP), and can be carried out under a local anaesthetic [NICE MTG].<sup>4</sup> The procedure was initially performed under a general anaesthetic in main theatres, before moving to a local anaesthetic protocol after the first few lists.

At the beginning of 2023, space became available at the Huddersfield Royal Infirmary that enabled

us to set up the 'Urology Diagnostic Unit' (UDU), a Urological Investigations Unit, which includes rooms for investigation and treatment. There is also a small operating theatre, which had existed previously but was no longer in use. We decided to completely move the UroLift service to the UDU, which was the opportunity we needed to create a more efficient care pathway, improve the patient experience, while positively impacting on waiting times. In doing so, we were aligned with GIRFT recommendations, which specifically include the UroLift System in its list of procedures that may be undertaken as an outpatient procedure.<sup>5</sup>

The UroLift System was chosen as a minimally invasive surgical treatment option to offer patients in the UDU because:

- It is recommended by NICE as an efficient and cost saving alternative to TURP or HoLEP.<sup>4</sup>
- It is straightforward and easy to learn, without requirement for additional resources apart from the UroLift implants and cystoscopes.
- It can be easily performed under a local anaesthetic.<sup>6</sup>
- It is associated with low complications rates.<sup>7</sup>
- Patients are typically discharged after a couple of hours without a catheter.<sup>7,8</sup>
- Provides durable results.<sup>9</sup>

CHFT Urology service receives around 200 referrals a year for BPH surgery, primarily TURP. Prior to being able to treat BPH patients in the UDU with UroLift, the average waiting time for a BPH procedure at CHFT was more than 52 weeks. At CHFT, TURP is associated with a theatre time of around 90 minutes and an average length of stay of 1-2 days.

## Methods

Setting up the service for success involved working as a team, with input from clinical, operational and finance colleagues. A plan was developed to provide a monthly local anaesthetic list in the UDU where patients could be treated with the UroLift System. This plan involved the following:

- Identify the space and time slot in the UDU for one all day list per month where UroLift would be performed.
- Identify equipment needs:
  - Stack system
  - UroLift implants (consumables) - average 4 per patient on the shelf
  - Reusable scopes - on the shelf
  - Lithotomy leg stirrups
- Develop referral criteria / pathway
- Review of patients on the waiting list for TURP and new patients being referred to us for LUTS to determine their suitability for UroLift. These patients were then contacted, and their options discussed.
- Develop plan to train the urologists and urology nurses involved in the UroLift procedure.
- Develop a process map for the day of surgery, which was signed off by relevant staff involved.
- Develop a process for follow-up of patients following the procedure.
- Develop implementation timeline and milestones.
- Develop a process for evaluation and review.

Patients typically selected for treatment with the UroLift System include:

- Patients with prostates of 30 – 80ml (according to the recommendations in the NICE guidance).<sup>4</sup>
- Patients who are less fit, with multiple comorbidities and may not tolerate a general anaesthetic or a more invasive procedure like TURP.
- Patients with certain disabilities in whom post-op catheterisation may be problematic.

- Patients in acute retention.<sup>10</sup>

Because patients often have complex symptoms, they are assessed in clinic to determine suitability for treatment. This may involve flexible cystoscopy and/or MRI or transrectal ultrasound to assess size and anatomy of the prostate.

To create better efficiency around patient selection, we are in the process of setting up a one-stop LUTS clinic and liaising with primary care to ensure that GPs are aware of the service and the referral criteria. The one-stop-clinic, which will operate in the UDU, will include a full assessment of the patient needed to determine the right treatment plan. This will include ultrasound, flexible cystoscopy, flow rate in a single visit.

## **On the day of the list**

We initially piloted the local anaesthetic protocol in the UDU and collected patient pain scores. After the successful pilot, we rolled the service out in full. Patients listed for the UroLift System are stacked on an all-day list, which operates monthly in the UDU, with up to 10 patients per list. We have found that stacking patients in this way is the most efficient way of running the service.

Although a fully functioning theatre is not required when performing the UroLift System under a local anaesthetic, the existing small theatre room in the UDU provided us with the necessary space to carry out UroLift and other minor low complexity procedures.

On the day of the list, dedicated roles within the team enable a smooth flow of patients through the process. Dedicated procedure staff include:

- Urologist
- Health Care Assistant (HCA)
- Scrub nurse
- Runner
- Operating Department Practitioner (ODP)

We could run the UroLift lists with just two staff in theatre plus the Urologist, however the extra support enables the session to run efficiently and with a large throughput of cases on the day. Beyond the procedure room, the UDU is also staffed with a wider team who provide support to the patients listed for UroLift, while also supporting other clinics going on in the UDU.

Around 15-20 minutes prior to the procedure, the patient is called from the waiting area and shown to a private ante-room to change into a gown. Here the nurse will administer the local anaesthetic at least 10 minutes prior to the procedure so it has time to take effect (see LA protocol). The patient will then walk from the ante-room to the procedure room, where more local anaesthetic is administered before the procedure.

The UroLift System is an endoscopic procedure that involves the cystoscopic delivery of permanent, implants that retract the obstructing prostatic lobes. The number of implants used depends on the anatomy and size of the prostate and is determined by the clinician during the procedure. After the appropriate number of implants have been placed, the UroLift System delivery device and sheath are removed, leaving retracted lateral prostatic lobes and the disobstruction of the urethra. Typically, a catheter is not used following a UroLift procedure.

After the procedure, the patient walks back to the ante-room, which has easy access to a toilet, where they get changed and then are shown to the waiting area. There is a post-procedure discussion with the Urologist and a bladder scan and then, if the patient has voided, they are discharged - typically after a couple of hours. No routine discharge medication apart from analgesia is prescribed. Patients are invited into clinic for a flow rate investigation at 6 weeks post

procedure, which is followed up shortly after with a consultant-led telephone follow-up.

### **Local Anaesthesia Protocol**

1. Cold (4<sup>0</sup>C) lidocaine gel 2%, 2 x 10 ml, instilled into the urethra via syringe at least 15 mins before the procedure.
2. A piece of gauze is tied around the glans to prevent the lidocaine from escaping.
3. Patient walks from the ante-room into the procedure room.
4. Patient is placed into lithotomy position and draped.
5. Once in position, a further 10 ml of cold (4<sup>0</sup>C) lidocaine gel 2% is instilled into the urethra via syringe.
6. Scope and UroLift implants inserted while talking to the patient. A member of staff is fully deployed in talking to the patient ('vocal local') during the procedure.

## **Results and evaluation**

As of December 2023, around 100 patients have been treated with UroLift at CHFT - with around 40 of those patients being treated in the UDU. Apart from the very early cases in theatre, patients are being successfully treated under a local anaesthetic. Patient reported outcomes (VAS scores, IPSS and Quality of Life) are being collected, which we plan to present once we have collected 3 months follow-up for the current cohort being treated in the UDU. We are expecting to see similar patient outcomes to the initial cohort treated in theatre, where the improvements in IPSS at the 3-month follow-up mirrored that observed at 3 months in clinical trials with the UroLift System.<sup>7</sup> In line with the clinical trial results for the UroLift System,<sup>7,8</sup> complications are very rarely seen and are very minor compared with the number and severity of complications that we routinely see with TURP.<sup>11</sup>

The monthly UroLift lists in the UDU are running smoothly and efficiently. We can treat 10 patients with the UroLift System in a single all-day list. This compares with TURP, where we would expect to treat only a maximum of 4-5 in an all-day list. Currently there are two urologists trained and signed off to perform UroLift.

Overall, the average number of implants required per patient treated at CHFT has been 3.4, which is comparable to the average number of implants used (3.5 implants) in NHS patients audited for the NICE Medical Technologies Guidance.<sup>4</sup> Average procedure duration for our UroLift lists in the UDU is 11 minutes, which is comparable with the procedure duration (14 minutes) for the UroLift procedure cited by NICE.<sup>12</sup> Typically, patients go home within 2 hours of the procedure.\*

### **Patient benefits**

#### **Trust benefits**

- Increase patient choice for BPH surgery. Options offered by CHFT now include a minimally invasive surgical treatment option.
- Pain scores (using a Visual Analogue Scale - VAS) recorded immediately after the procedure have also shown that UroLift is generally well tolerated when performed under a local anaesthetic.
- Patients who need surgery for their LUTS from BPH but are unfit for a general anaesthetic can now be effectively treated under a local anaesthetic.
- Reduction in waiting times: At the beginning of the year, patients were waiting more than 52 weeks for BPH surgery. The current waiting time for surgery is less than 30 weeks, considerably less than the current national average. This is due, in part, to the efficiencies created by being able to treat many of these patients with a minimally invasive surgical treatment in a low complexity setting away from main theatres.
- Theatre and inpatient bed capacity: By treating 70 patients with UroLift in the UDU

instead of TURP, we estimate that capacity is released for around 16 all-day theatre lists and around 70-140 bed days. This capacity can be used for more urgent cases such as cancer.

- Our pathway redesign for the surgical treatment of BPH is aligned with the recommendations of GIRFT to treat more urology patients in an outpatient setting or in the UIU.
- As UroLift is a day case treatment, there is no risk of delayed discharge of care as exists with procedures such as TURP, where patients stay overnight.

## Key learning points

- Having dedicated monthly lists, which are planned in advance, enables efficient stacking of patients to maximise efficiency and throughput.
- As well as new patient referrals, consider the suitability of patients who are currently on a waiting list for TURP as potential candidates for treatment with the UroLift System.
- Consider the suitability of patients in acute retention as candidates for treatment with the UroLift System as evidence supports this approach.<sup>10</sup>
- Data collection and audit is very important to demonstrate patient benefits and efficiency savings.
- Key tips for the local anaesthetic protocol
  - Ensure lidocaine gel is administered cold (from the fridge)
  - Administer 2 tubes lidocaine (10 ml) at least 15 mins beforehand
  - Wrap glans to ensure lidocaine gel remains in place
  - Advice to patient: Not to touch the area or remove the wrap. If the patient needs to urinate after the lidocaine gel has been administered, they should be advised to inform the nurse so that more lidocaine gel can be administered afterwards.
  - Vocal local - one of the team talks to the patient during the procedure which helps distract the patient
- With the right planning, we have shown that low complexity, short duration, LA cases such as the UroLift System, can easily and efficiently be delivered in a Urological Investigations Unit, away from the resource intensive set up in main theatres.

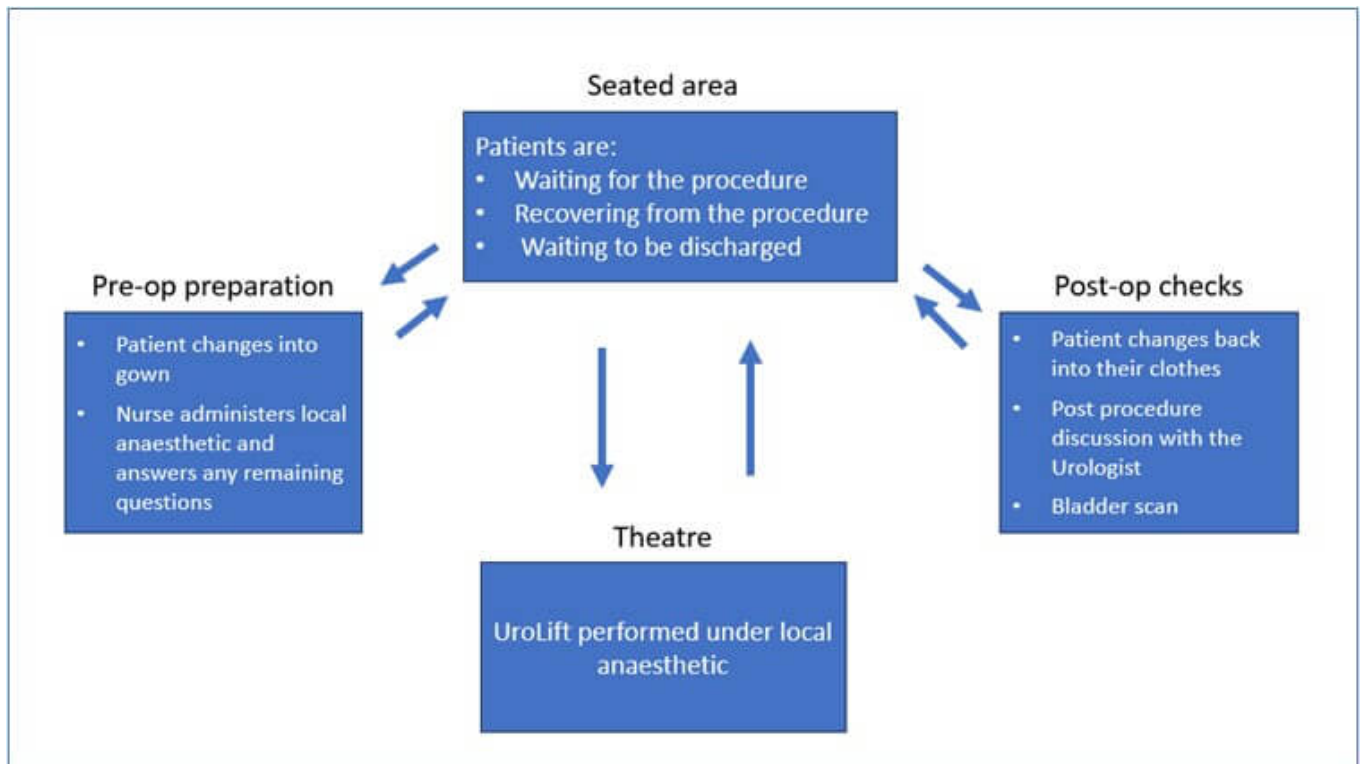
## UroLift Safety Information

Indicated for the treatment of symptoms of an enlarged prostate up to 100cc in men 50 years or older. As with any medical procedure, individual results may vary. Most common side effects are temporary and include hematuria, dysuria, micturition urgency, pelvic pain, and urge incontinence (Roehrborn, J Urology 2013). Rare side effects, including bleeding and infection, may lead to a serious outcome and may require intervention. Consult the Instructions for Use (IFU) for more information.

\*In the LIFT trial (the pivotal RCT for UroLift), an average of 4.9 implants per patient were used.



**Figure 1.** Permanent intra-prostatic UroLift® implants are delivered to separate encroaching lateral and median prostate lobes and expand the urethral lumen



**Figure 2.** Patient Flow. UroLift local anaesthetic list in the Urology Diagnostic Unit

## References

1. Berry, S.J., et al., The Development of Human Benign Prostatic Hyperplasia with Age, *J Urology* 1984; 132: 474-479.
2. GIRFT. Clinically-led Specialty Outpatient Guidance. Practical OPD guidance for 17 services to maximise efficiency and reduce waiting times for patients. NHS England. April 2023.
3. GIRFT. Urology National Specialty Report. 2018.



4. NICE. (2021). Urolift for treating lower urinary tract symptoms of benign prostatic hyperplasia. Medical Technologies Guidance [MTG58]. May 2021.
5. GIRFT, CPOC, and BADS (2020). Report: National Day Surgery Delivery Pack. September 2021.
6. NICE Shared Learning Case Study. Treating Benign Prostatic Obstruction (BPO) with UroLift in an outpatient setting. NHS Fife. June 2020.
7. Roehrborn, C.G. et al. (2013). Multi-Center randomized controlled blinded study of the prostatic urethral lift for the treatment of LUTS associated with prostate enlargement due to BPH: the L.I.F.T. study. *J Urol*, 190(6), pp. 2161-2167.
8. Shore, N. et al. (2014) Prospective multi-center study elucidating patient experience after prostatic urethral lift. *Can J Urol*, 21(1), pp. 7094-7101.
9. Roehrborn, C. et al. (2017). Five year results of the prospective randomized controlled prostatic urethral LIFT study. *Can J Urol*, 24(3), pp. 8802-8813.
10. Rochester, M. et al. (2023). Prostatic urethral lift for subjects in urinary retention (PULSAR): 12-Month results of a prospective controlled trial compared with real-world outcomes. *BJUI Compass*. <https://doi.org/10.1002/bco2.280>.
11. European Association of Urology. (2023). EAU Guidelines on Non-Neurogenic Male Lower Urinary Tract Symptoms (LUTS), incl. Benign Prostatic Obstruction (BPO).
12. NICE Resource Impact Template: Benign prostatic technologies - Greenlight (MTG29), Rezum (MTG49), UroLift (MTG58), Plasma system (MTG53) and mTURP. March 2022.