**AHSN Innovation case study template**

## **Case study name:**

Urolift – a community-based alternative treatment for Benign Prostatic Obstruction (BPO)

## **AHSN /S involved:**

South West AHSN

**Images:**

**Overview summary (200 words maximum)**

At RD&E, there was an urgent need to free up theatre capacity and inpatient beds. Along with other acute Trusts in the region, RD&E was struggling to meet waiting time targets, with patients sometimes waiting over a year for non-cancer surgery.

We introduced Urolift, a minimally invasive day case treatment for BPO, which enabled us to move the service out of the main hospital to the community hospital in Tiverton. A recent audit of the service has shown:

* Improved patient experience
* Improved inpatient bed capacity
* Released theatre capacity in main theatres
* Generally freed up capacity in the main hospital for more urgent work such as cancer
* Reduced waiting times for non-cancer surgery

# Challenge/problem identified (150 words maximum)

The Royal Devon & Exeter (RD&E) NHS Trust serves a large population of more than 460,000 people in Exeter, East Devon and Mid-Devon. The Trust admits more than 120,00 patients each year and holds 450,000 outpatient clinics every year. Demographic change towards a more elderly population is driving an increased need for acute hospital care, which is outstripping capacity and resulting in longer waiting times. There was an urgent need to free up theatre capacity and inpatient beds.

Along with other acute Trusts in the region, RD&E was struggling to meet waiting time targets, with patients needing surgery for benign conditions, such as prostatic obstruction having to wait sometimes over a year for treatment. Furthermore the Trust was struggling to meet some cancer targets due to lack of theatre capacity.

Partly in response to the Acute Service Review by Devon STP, we sought to bring about an evidence-based change to our urology service that would be more efficient and improve outcomes for men with lower urinary tract symptoms caused by benign prostatic obstruction. We also sought to develop a community hospital day case unit based alternative to the in-patient treatment model, which would relieve the pressure on the main hospital beds and theatres, and free up capacity for patients requiring in-patient treatment for both benign and malignant conditions.

In the past, the standard surgical treatment at RD&E offered to men with lower urinary tract symptoms (LUTS) from benign prostatic obstruction was transurethral resection of the prostate (TURP). The Trust performs around 150 TURP operations each year, with an average inpatient stay of 3 days. TURP is performed under a general or spinal anaesthetic, taking an average of 90 minutes of theatre time. Patients normally have an indwelling catheter for 1-2 days following TURP and are only discharged once this can be removed. Some men are still discharged with the catheter in situ with the need to return for a TWOC (trial without catheter) after a few days.

While TURP is effective at relieving the symptoms of LUTS, it can be associated with significant post-operative complications, including bleeding, infection and incontinence, which can prolong length of stay and delay recovery, and may also require further intervention. Permanent side effects can include sexual dysfunction and urinary incontinence. The requirement for an indwelling catheter after the procedure increases the risk of urinary tract infection.

# Actions taken (150 words maximum)

We saw the opportunity to introduce an alternative treatment to TURP, which was recommended by NICE and has a good evidence base to support it as an effective and safe treatment for BPO. As a minimally invasive, day case treatment UroLift (prostatic urethral lift) gave us the opportunity to move the treatment of patients with symptomatic BPO to a community setting. Urolift is performed under a local anaesthetic and sedation, each case taking as little as 20-30 mins of theatre time. Patients are generally discharged within a few hours, and follow-up can be by telephone, although we have been seeing patients in clinic to audit their outcomes. UroLift is also associated with a significantly reduced risk of permanent side effects and serious complications, compared with TURP. UroLift also does not require the patient to be catheterised, therefore reducing the risk of catheterisation-associated UTI.

The decision to offer Urolift at RD&E was clinically driven by the clinical urology team., We obtained approval by the Clinical Effectiveness Committee and Local Trust Board and CCG after a business case process, which outlined the current need for change, the evidence base for Urolift and the potential benefits to patients and the trust.

We started offering Urolift to patients in July 2017, from the community hospital surgical day case unit in Tiverton. Our policy was to offer Urolift to patients on the waiting list for TURP surgery. We set up dedicated Urolift lists, where 6 patients were treated in a morning list. Patients are sedated and, after recovery, are discharged in the afternoon. Patients are followed up in clinic at 6 weeks.

Typically, patients are discharged without a catheter, unless they already had a catheter pre-operatively, or were unable to void satisfactorily after the procedure. Less than 10% of men required a catheter post-operatively. Men discharged with a catheter a dedicated TWOC clinic a few days later.

## **Impacts / outcomes (300 words maximum)**

A prospective database of all patients undergoing Urolift from July 2017 to May 2018 (93 patients in total) has provide important outcomes of this new service. The audit of our service showed 75% of all patients receiving Urolift are discharged, satisfied with the outcome, on first follow up at 6-8 weeks. Of men with uncomplicated BPO (not previously in urinary retention)88% were discharged, satisfied, as first follow up.) We do not routinely follow-up men following TURP, so direct comparison with this group is not possible in our series. There was also a **significant reduction in waiting times**, such that the waiting time for both TURP or Urolift is now just 2-3 months (compared with up to1 year for TURP prior to introducing Urolift).

Overall there were low complication and readmission rates in the patients treated with Urolift. Overall only 7% of men required further management, and almost all of these were more complex patients with either significantly enlarged prostates or other conditions such as urinary retention or prostate cancer

The average number of Urolift implants required was 4 (range: 2-7).

We have noted at follow-up that the majority of men have had a very quick and uneventful recovery from their Urolift procedure, with a few days of haematuria and dysuria, but the majority back to normal activities, including work, within a week. We have not seen any sexual side-effects, but have noted that some men have found that their sexual function has improved, probably as a result of stopping their prostate medications.

We have demonstrated that Urolift is a rapidly deployable technology, with a fast learning curve, that does not rely on capital purchase, infrastructure or staff changes. Eligible patients can be recruited from the urology waiting list or from outpatient clinics and 6 patients can be treated in a single half-day day theatre session. We estimate that 50-60% of patients currently needing surgery for benign prostate obstruction are clinically eligible.

The main benefits of introducing Urolift at RD&E have been:

* Improved patient experience, no serious complications and no serious side-effects
* Improved inpatient bed capacity
* Released theatre capacity
* Enabling treatment of patients in a community day case unit away from the main hospital, which has freed up capacity for more urgent work such as cancer
* No cancellations of lists or individual patients due to lack of availability of in-patient beds or prioritisation of more urgent cases in main theatres. Patients having surgery in the community day-case unit are ‘protected’ from these issues.
* Reduced burden on waiting times: Referral to Treatment (RTT) Performance achieved 92% (Incomplete Pathways) and 90% (Admitted Pathways)

When taking into account the opportunity savings, compared with TURP, such as reduced inpatient bed days, theatre time and follow-ups, we calculated an overall cost saving to the trust of £33,600.

## **Plans for the future (100 words maximum)**

The Trust intends to continue to offer Urolift to clinically eligible men seeking a minimally invasive treatment option. We anticipate the current model of offering the service from the community hospital in Tiverton will continue, as this takes the burden away from the main hospital. As a result of our audit we are now recommending Urolift as the primary surgical procedure for men with uncomplicated BPO. We have become more cautious offering Urolift to men in urinary retention, as the outcomes are less good and probably inferior to TURP. After counselling, however, many men in this situation will still choose a Urolift as their primary procedure, but to it being minimally invasive with a rapid recovery time and minimal side-effect profile. We continue to offer Urolift to men with more complex conditions including, early prostate cancer, post-radiotherapy and post-brachytherapy.

As our experience has developed, we have found that we are able to successfully treat men with unusual anatomical configurations such as: large median lobes and high bladder neck.

We plan to continue to develop our techniques in this direction.

We have found Urolift to be an effective technique for men from 50 up to their 90s. It has also been very useful in the very elderly, allowing surgical treatment of BPO, without the need for anaesthesia or in-patient treatment.

Urolift seems to be a particularly good option for younger men, allowing them to quickly return to an active lifestyle quickly, including employment, and with no adverse effect on sexual function. I see this as an expanding indication as an alternative to medications, which, for many men, are either ineffective or associated with side-effects, leading to a significant discontinuation rate.