NICE medical technology adoption support for the GreenLight XPS laser system for treating benign prostatic hyperplasia – insights from the NHS

Health technology adoption programme
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1 Introduction

This resource has been developed to provide practical information and advice on NICE medical technologies guidance on GreenLight XPS for treating benign prostatic hyperplasia.

NICE’s adoption and impact team worked with consultant urologists who use GreenLight XPS in NHS organisations to gather their learning and experiences.

The GreenLight XPS procedure involves using a laser to reduce the size of the prostate (see section 2 of the guidance). Using GreenLight XPS requires training and a mentorship scheme for adoption in the NHS.

The benefits of using GreenLight XPS as reported by NHS staff involved in producing this resource include:

- cost savings associated with a day-case procedure
- another treatment option for benign prostatic hyperplasia
- improved patient experience compared with other treatments: less bleeding, can be done as a day case and under spinal anaesthetic if necessary
• safe and fewer initial complications than transurethral resection of the prostate (TURP)

• fewer cancelled operations because of less need to access hospital beds.

The learning gained from existing users is presented in this report as a series of examples of current practice. They are not presented as best practice but as real-life examples of how NHS sites have adopted this technology.

This resource is intended for the sole purpose of supporting the NHS in adopting, evaluating the impact of adopting or further researching this technology. It is complementary to the guidance and was not considered by the medical technologies advisory committee when developing its recommendations.

GreenLight XPS is only recommended in non-high-risk patients. However, NICE recommends that specialists using GreenLight XPS in high-risk patients collaborate in collecting and publishing data for these patients. High-risk patients are considered to be people who have:

• an increased risk of bleeding or

• prostates larger than 100 ml or

• urinary retention.

2 Current practice

NICE guidance on managing lower urinary tract symptoms in men recommends several surgical options for people with voiding symptoms secondary to benign prostatic hyperplasia, who have prostates smaller than 100 ml, and only if symptoms are severe or if drug treatment and conservative management options have been unsuccessful or are not appropriate. These options include:

• monopolar or bipolar transurethral resection of the prostate (TURP)

• monopolar transurethral vaporisation of the prostate (TUVP)

• holmium laser enucleation of the prostate (HoLEP); only at a centre specialising in the technique, or with mentorship arrangements in place)

• transurethral incision of the prostate (TUIP; only in prostates smaller than 30 ml).
Inpatient TURP remains the current standard surgical intervention. TURP is associated with potential permanent side effects including erectile dysfunction, retrograde ejaculation and urinary incontinence. It also necessitates the use of a catheter for several days after the procedure, which may be uncomfortable.

Increasingly there are new surgical technologies and techniques to ease symptoms associated with benign prostatic hyperplasia. The NICE guideline on managing lower urinary tract symptoms in men includes a research recommendation for newer techniques including laser vaporisation.

NICE medical technologies guidance on the TURis system for transurethral resection of the prostate recommends the use of TURis (bipolar TURP) over monopolar TURP.

NICE medical technologies guidance on UroLift for treating lower urinary tract symptoms of benign prostatic hyperplasia recommends this as a further alternative treatment.

3 Summary of NICE recommendations

Evidence supports the case for adopting GreenLight XPS for use in non-high-risk patients.

There is insufficient evidence to support the case for adoption in high-risk patients. NICE recommends that specialists collaborate in collecting and publishing data for these patients.

Cost savings with GreenLight XPS compared with TURP are determined by the rate of day-case treatment. With 36% of GreenLight XPS procedures done as day cases, estimated cost savings are £60 per patient. Expert advice indicated that higher day-case rates are currently achieved so greater cost savings are plausible.

NICE also recommends that hospitals adopting GreenLight XPS plan for service redesign to ensure that day-case treatment can be delivered appropriately.

4 Tips for adopting GreenLight XPS

- Before implementation, collect baseline data on current surgical interventions and develop data collection mechanisms to monitor how the technology affects quality and safety, patient experience, productivity and improved clinical outcomes. Consider auditing at least the first 20 cases to enable reflection, ensure safety and competency and to identify any remedial action (see insights from the NHS).
• Ensure the whole team, including service managers and theatre staff, have appropriate level training to maximise staff confidence, understanding and motivation (see education).

• Ensure competency is achieved before doing the procedure independently to increase confidence and efficiency (see education).

• Ensure early liaison with the local laser safety manager and be aware of the relevant MHRA guidance (see care pathway mapping).

• Ensure patient information is in place and available in a timely fashion to explain the procedure, and that aftercare arrangements and frequently asked questions are covered (see insights from the NHS).

• Clearly define the selection criteria including size and configuration of prostate (see patient selection and treatment planning).

• Identify how many people will be expected to benefit from the introduction of the procedure. This will be important when discussing purchase of fibres and contractual obligations with the manufacturer and will prevent wastage associated with expiry of unused fibres.

5 Insights from the NHS

University Hospitals of North Midlands NHS Trust

University Hospitals of North Midlands NHS Trust comprises 2 sites: the Royal Stoke University Hospital and the County Hospital. The trust serves a population of around 700,000 in the North Midlands. It has over 1,000 beds across both hospitals and around 8,000 staff.

The urology department at the trust is currently based at Royal Stoke University Hospital and comprises 8 consultant urological surgeons. The team offers TURis as well as GreenLight XPS as surgical treatment options for people with benign prostatic hyperplasia. Approximately 60 of 120 annual surgical interventions are GreenLight XPS. The team are also considering a second GreenLight XPS console at County Hospital to expand the service.

An earlier version of the GreenLight laser was introduced in around 2008 because of the cost savings associated with its day-case capability. The equipment has been regularly upgraded since 2008 and the XPS console is currently in use. Patients referred to the urology service are seen by one of the surgeons, and people for whom the procedure is suitable are directed to the sole, lead surgeon for GreenLight XPS.
Around 75% of these patients are already in urinary retention and have an existing urinary catheter, putting them in the high-risk group. However, GreenLight XPS is not routinely contraindicated for these and other patients considered to be high risk. GreenLight XPS has become the default treatment option for all patients with benign prostatic hyperplasia unless cancer is suspected. All patients on anticoagulation treatment are assessed. Warfarin is not stopped and although attempts are made to stop clopidogrel this is not considered essential. Patients with prostates over 100 ml are considered for suitability. To date, the largest prostate treated with GreenLight XPS was 200 ml. Usually, 1 fibre per procedure is sufficient unless the prostate is very large, when 2 may be needed.

Patients are admitted at different times during the day, depending on the plan for catheter removal. Those not previously in retention tend to have their catheter removed the same day and have an earlier appointment slot. People in retention go home with a catheter in situ and can be booked in later in the afternoon. Catheter removal varies according to home location: in Stoke, district nurses provide a catheter removal service; in Stafford, the Royal Stoke University Hospital provides this service.

The team have experienced high patient satisfaction and low complication rates across all patients, including high-risk groups. Overall, approximately 90% of patients have remained catheter-free as a result of GreenLight XPS. This figure is in line with success rates for TURP. The team have never had to do a blood transfusion after a GreenLight XPS procedure alone; twice, transfusions were needed when other procedures were done at the same time. In one case, a transfusion was needed because of the administration of thrombolysis after post-procedure myocardial infarction and in the other case, the patient had also had bladder stone removal. Day-case rates are reported to be well maintained at 70% to 75%.

A local audit (retrospective telephone questionnaire) of 32 day-case patients showed that 29 were happy to go home the same day (28 with a catheter), and that dysuria was not identified as cause for complaint. Only 4 of 28 who had a catheter before the procedure still needed one long term. No data were collected on symptom recurrence.

Theatre staff find the procedure very straightforward and anaesthetist colleagues find it highly preferable to TURP. They say it is safe and patients remain stable throughout the procedure. Sepsis has been rare since GreenLight's adoption in 2008.

Training consisted of:

- attending a course at Kings College Hospital
• observation (3 cases) by a company expert (non-surgeon)

• access to support from a colleague who was an experienced user.

Initially, the occasional case was converted to TURP because of bleeding, but with experience this no longer happens.

Lessons learned:

• Use the device frequently to build surgeon confidence and experience.

• Build confidence with smaller prostates before attempting larger ones.

• Know how to deal with bleeding if it occurs.

• Ensure at least the first 10 procedures are supervised.

• Be careful not to burn through the cystoscope with the laser.

Hampshire Hospitals NHS Foundation Trust

Hampshire Hospitals NHS Foundation Trust consists of Andover War Memorial Hospital, Basingstoke and North Hampshire Hospital and the Royal Hampshire County Hospital. It serves a population of approximately 600,000 across Hampshire and parts of west Berkshire. There are approximately 983 beds of which 51 are surgical.

The urology service consists of 5 consultant urologists (some part time) who see 500 to 600 new patients with benign prostatic hyperplasia per year. The GreenLight XPS procedure is currently only available at Basingstoke and North Hampshire Hospital. Here, approximately 70% of patients having outflow surgery have GreenLight XPS; the rest have monopolar or bipolar TURP. The team have also recently introduced UroLift to the service.

The GreenLight PV (80 watts) was introduced in 2005 by a newly appointed consultant who was already trained in its use. This was then upgraded to the 120 watts system in 2007, before GreenLight XPS (180 watts) was implemented in 2010. Clinicians were positive about its adoption because of the plausibility of the mechanism of action (the laser light is absorbed by oxyhaemoglobin and then vaporizes the tissue in a haemostatic way) and the possibility of a shorter hospital stay.

A business case was produced that focused on the potential to do more procedures as day cases and eliminating the need for 3-way catheters, overnight irrigation and further blood tests. The
Pelican Cancer Foundation provided funding for the first version of the GreenLight device. Service managers negotiated purchase of the lasers and demonstrated how costs could be offset with savings from reduced length of stay. The console maintenance costs (waived in the first year) were also taken into account.

Most procedures are done by an associate specialist colleague, with 1 or 2 done every week on a dedicated day-case operating list. The consultant urologist lead for GreenLight XPS uses the device for around 2 complex cases (usually prostates over 100 ml) per month on a regular operating list. These patients tend to stay overnight and have their catheter removed the following morning. The operating theatres have been equipped with a compatible GreenLight XPS laser socket. Enhanced laser safety precautions are in place including manual door locking and goggles.

The trust also offers GreenLight XPS to high-risk patients and it is considered a local treatment option for people in urinary retention, people with large prostates (routinely up to 200 ml) and people on anticoagulants. Whenever possible, warfarin and clopidogrel are stopped after consultation with specialist colleagues to evaluate individual patient risk. There have been no adverse events as a result of stopping anticoagulation in any patient having GreenLight XPS. Rates of secondary haemorrhage 2 to 3 weeks after the procedure were of more concern in these patients than perioperative bleeding, but no blood transfusions have been needed as a result of either consequence. One fibre per procedure is sufficient except in very large prostates.

Catheters are not removed the same day. Either patients go home the same day with a catheter in situ and return to the hospital outpatient department 5 days later for catheter removal, or they stay overnight and have the catheter removed the following morning (less than 24-hour stay). The team have been working to change arrangements so that return appointments are closer to 48 hours post-procedure.

When the 80 watt system was first introduced, the trust achieved exceptionally high day-case rates of 97%. Over time, and as more experience was gained with the XPS version of the device, people with larger glands, at higher risk or with further to travel also had the procedure. These people are more likely to be admitted to the short-stay unit overnight. In 2015, 40% of patients were discharged the same day. The trust receives a minimum of £204 uplift by way of a regional best practice payment for every patient who has benign prostatic hyperplasia surgery (either TURP or GreenLight XPS) and is discharged the same day.

Hampshire Hospitals NHS Foundation Trust participated in the GOLIATH trial[1], which showed that GreenLight XPS had equivalent outcomes to TURP and a better side-effect profile. This confirmed
the trust’s experience of patients doing very well with this procedure (particularly those previously in retention).

Although patient appeal has always been high, anticipating patient expectations has been a challenge (particularly because the short length of stay limits staff opportunities to answer patient questions about aftercare). The trust produced a patient information leaflet, which it then refined to include frequently asked questions. Identifying a nurse specialist and link person has also vastly improved the patient experience.

Lessons learned:

- It can take time to become proficient and confident in the technique.
- Detailed patient information should be developed to include aftercare.
- A nurse specialist and dedicated phone line (with answerphone and reply within 24 hours) greatly improves patient experience.

**Doncaster and Bassetlaw Hospitals NHS Foundation Trust**

**Doncaster and Bassetlaw Hospitals NHS Foundation Trust** comprises 3 hospitals: Doncaster Royal Infirmary (DRI), Bassetlaw Hospital and Montagu Hospital Mexborough. The trust serves a population of around 400,000, has more than 720 beds and approximately 6,500 staff.

A urology service is available at all 3 hospitals, but the main hub is at the DRI. A team of 7 consultant urologists currently do 250 to 300 monopolar TURP procedures each year. In July 2014, a business case was submitted that focused on the number of cancelled operations for benign prostatic hyperplasia because of lack of beds. Patients with cancer are always given priority, so treatment for patients with benign prostatic hyperplasia frequently had to be rescheduled. The day-case potential with GreenLight XPS was hugely valuable because it would enable more efficient use of consultant time (booked operations would proceed as planned regardless of bed state), reduce the need for hospital beds, and reduce inconvenience for patients awaiting treatment. The safety aspect of the procedure was also highlighted: patients lose less blood than with TURP, transfusions are rarely needed and there is no risk of TURP syndrome.

The business case was approved within a month and GreenLight XPS was introduced in October 2015. One consultant urologist is the lead and sole user of GreenLight XPS, because this patient group is his main clinical interest. In the first 6 months after adoption, around 35 procedures (2 to 3 per week) were done.
Training involved a 2- to 3-week loan of a simulator, completing a course at King's College London, further training at Pinderfield's hospital, and supervision and mentorship in theatre.

Non-high-risk patients are selected after cancer has been ruled out through digital rectal examination and prostate-specific antigen (PSA) tests. GreenLight XPS is also used in high-risk patients, including those in urinary retention and on anticoagulants. Warfarin, clopidogrel and newer anticoagulants are stopped for 5 days according to a local trust-bridging protocol.

The trust has focused on auditing practice and ensuring safety based on treating smaller prostates (up to 80 ml). The intention is to eventually move to also treating larger prostates.

The procedure is done in the operating theatre with an automatic door-locking feature as soon as the laser is placed on standby. The console was obtained at no initial cost with a contractual arrangement for the purchase of a minimum number of laser fibres. Usually, one fibre is used per procedure.

Patients are provided with a nurse-led pre-assessment appointment with consultant input as needed. They are admitted to the day unit in the morning and sent home the same day with a small catheter. Two days later they return to an outpatient area at the DRI for catheter removal and to establish adequate bladder emptying. Around 85% of all patients who have the GreenLight XPS procedure had successful catheter removal with this arrangement. Of the 15% that did not, another catheter was inserted, the patients were discharged and follow-up appointments were booked for 3 weeks later.

Since GreenLight XPS's introduction, 33 out of 35 procedures have been done as a day case.

Local audit on the first 21 procedures has showed:

Of the 21 patients:

- 16 had resolution of symptoms
- none needed blood transfusion
- 4 had persistent storage symptoms
- 1 had persistent chronic retention
- 2 had a urinary tract infection
• 1 had erectile dysfunction

• 1 had urgency incontinence that was present before the procedure.

These data should be interpreted with caution given the variance in follow-up time, which was between 2 and 20 days.

Reassurance was also gained around surgical technique and volume of tissue removed, since a statistically significant improvement in pre- and post-procedure (mean) urinary flow rates was found.

The team plan to collate longer-term data that will more accurately reflect symptom resolution and complication rates at standardised follow-up intervals.

Lessons learned:

• Work with the estates team/laser safety lead to prevent a delay in initiating the procedure because of the installation of laser safety features.

• Ensure that these safety measures are in place before ordering the console, because of the shelf life of the lasers.

• Adequate mentorship and guidance is pivotal to successful adoption

• Plan a realistic timeline for implementation to include:
  - training on the simulator and in centres where the technology is currently in use
  - identifying a mentor
  - planning a date for theatre modifications in line with laser safety
  - setting up the console 1 to 2 weeks before commencing mentorship
  - repeating simulator training as a refresher
  - starting with mentorship.

6 How to implement NICE's guidance on GreenLight XPS

The experiences of these NHS organisations have been used to develop practical suggestions for how to implement NICE guidance on GreenLight XPS. Local organisations will need to assess the applicability of the learning from the examples of current practice, taking into consideration the time, resources and costs of an implementation programme.

**Project management**

This technology can be best adopted using a project management approach. NICE has produced the [into practice guide](#), which includes a section on what organisations need to have in place to support the implementation of NICE guidance in this way.

**Implementation team**

The first step is to form a local implementation team who will work together to implement the technology and manage any changes in practice.

Individual NHS organisations will determine the membership of this team and how long the project will last. In order to implement this guidance in an effective and sustainable way, consider the following membership of the team:

- Clinical champion(s): should have the relevant knowledge and understanding to be able to drive the project, answer any clinical queries and champion the project at a senior level. This could be a consultant urologist with specialist interest in lower urinary tract symptoms, ideally with experience of TURP.

- Project manager: could be someone in a clinical or managerial role to be responsible for the day-to-day running of the project, coordinating the project team and ensuring the project is running as planned.

- Management sponsor: could be a service manager or other senior manager/accountant who will be able to help assess the financial viability of the project, drive the formulation of a business case and help to demonstrate the cost savings achieved.

- Clinical audit facilitator: to help set up mechanisms to collect and analyse local data related to the project metrics and audit needs. Could be a clinical fellow, medical student or other staff member.
Other stakeholders/staff: will be valuable members of the project team because they will be providing the service. These could include an anaesthetist, theatre staff (including theatre nurses), a nurse specialist, and laser-safety and estates representatives.

**Patient selection and treatment planning**

Define the patient selection criteria and consider this during patient pathway mapping. If patient selection includes high-risk patients, will GreenLight XPS be introduced with collaborative data collection as per the NICE recommendation? If so, consider contacting the local R&D lead and see measuring success.

Decide when and how to assess individual patients on anticoagulation. Decision-making could include liaising with relevant colleagues and consulting local or national anticoagulation protocols.

A small amount of bleeding can occur during the GreenLight XPS procedure, even in non-high-risk patients. Part of the training process is learning how to deal with this, including using the device’s anticoagulation-cauterising feature.

Patients for whom general anaesthetic may be unsafe can have the procedure with a spinal anaesthetic. However, the trust has reported that people having spinal anaesthetic tend to have more problems with catheters.

**Care pathway mapping**

NICE has produced advice on mapping care pathways to help organisations through the technology adoption process.

Consider what changes to the care pathway will be needed to achieve a day-case service for most patients. These could include:

- Pre-assessment appointments – alongside the clinical pre-assessment it is useful to establish patient collection/transportation arrangements to avoid any last minute admissions.
- Staff changes – establish who will lead the pre-assessment, book the patients in and deliver patient information.
• Catheter removal arrangements – confirm who will remove catheters and where this will occur.

• During planning for any return appointments, consider the length of time patients remain at home with a catheter in terms of comfort, consider whether a smaller or different catheter be used and the optimum time for removal to allow for reduction in any local inflammation.

Measuring success

In order to demonstrate the local benefits of adopting GreenLight XPS it is important to take measurements before, during and after implementation. Some of these measures will not be routinely collected and sites should consider a data collection methodology that is appropriate to the service. The sites involved in developing this adoption resource suggested collecting data on:

• patient characteristics, American Society of Anaesthesiologists (ASA) score and indication for surgery, whether non-high-risk or high-risk

• operative details such as time spent operating the laser as a proportion of total procedure time (defined by insertion until removal of cystoscope; a higher proportion indicates higher efficiency), energy delivered, and number of laser fibres used

• International Prostate Symptom Score (includes quality of life score)

• post-void residual (pre- and post-treatment)

• urinary flow rate (pre- and post-treatment)

• frequency of completion as day case and length of stay

• number of procedures (and as a proportion of all benign prostatic hyperplasia surgery)

• complication rates (urinary tract infections, erectile dysfunction, urgency incontinence, blood transfusion)

• readmission rates

• symptom resolution

• persistent storage symptoms

• persistent chronic retention.

Clinicians may also wish to review the key clinical outcomes presented in section 3 of the guidance.
Clinicians who are considering trial-level research are free to contact external assessments centres who may be commissioning research. Details can be obtained through christopher.pomfrett@nice.org.uk.

Overcoming implementation challenges

Table 1 shows the challenges reported by NHS sites that have implemented GreenLight XPS.

Table 1 Reported implementation challenges for GreenLight XPS

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Suggested actions</th>
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<tbody>
<tr>
<td>Capital and ongoing revenue costs</td>
<td>Prepare a business case including full cost considerations for GreenLight XPS compared with current procedures across a complete service budget.</td>
</tr>
<tr>
<td>Clinical acceptance of a new procedure</td>
<td>Securing engagement from all members of the urology team can be challenging and can pose a risk to successful adoption of the technology.</td>
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<tr>
<td></td>
<td>Select appropriate metrics to demonstrate clinical benefits, safety and demand. Provide adequate training, information and evidence base for the use of the technology.</td>
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<tr>
<td></td>
<td>Information could include the fact that previous versions of the device had problems with laser fibre degradation, meaning that occasionally more than 1 fibre was needed per procedure. The XPS system incorporates improvements such that 1 fibre is effective for an entire procedure.</td>
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<tr>
<td></td>
<td>It is anticipated that the GreenLight XPS procedure may be suitable for up to 59% of people with benign prostatic hyperplasia voiding symptoms, for whom surgery is suitable as per the NICE recommendations (based on non-high-risk status), so it would not be essential for all surgeons to be trained. However, all will need to be able to identify suitable patients and refer them as appropriate.</td>
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Resource impact

A resource impact report and template have been prepared to support the implementation of the guidance.
NICE estimates the number of people in England with benign prostatic hyperplasia who may be eligible for the GreenLight XPS procedure to be approximately 13,600. The annual saving associated with implementing the guidance is around £2.3 million, assuming a day-case rate of 53%. This is equivalent to around £4,200 per 100,000 population.

The 3 sites that contributed to this resource reported day-case rates of 70–75%, 40% and 94%. These rates include high-risk patients.

**Business case**

Developing a business case should be a priority for the implementation team. Local arrangements for developing and approving business plans will vary from trust to trust, and each organisation is likely to have its own process in place.

NICE has produced advice on building a business case to help organisations with technology adoption.

In developing a business case for GreenLight XPS, consider the following:

- **Clinical rationale:** include an evidence summary showing non-inferiority (compared with TURP) in non-high-risk patients, as well as clinical outcomes and safety data in high-risk patients.

- **High-risk patients:** these patients would not usually be considered for TURP. Offering them GreenLight XPS as part of data collection could enhance trust performance against other national drivers.

- **National drivers:** the NICE quality standard for lower urinary tract symptoms in men states that people with voiding symptoms should be offered surgery only if voiding symptoms are severe or if drug treatment and conservative management have been unsuccessful or are not appropriate. Adopting GreenLight XPS may add to the capability of the trust to increase the proportion of people with voiding symptoms who are offered surgery and who have the procedure as a day case.

- **Potential cost savings:** from reduced bed days (the higher the day-case rate, the higher the cost saving).

- **Acquisition options:** purchase console outright with discounted fibres or obtain the console at no cost with more expensive fibres (explore with manufacturer and project fibre usage).
Annual maintenance costs: these may be waived in the first year, but need to be considered for subsequent years.

Confirm if capital outlay is needed: for laser safety features and theatre compatibility.

**Education**

The manufacturer provides a 3-phase training system that is supplemented by ongoing manufacturer-commissioned clinical mentorship.

- Online training that includes laser safety/physics and how to perform a procedure.
- Workshop with live or video surgery demonstration and simulation training
- Performing the procedure under expert supervision, followed by ongoing mentorship; a clinical mentor visits the trainee to observe and advise on technique; and the training is done in several phases as competence develops.

All new users are expected to complete the training. There are 7 trained mentors nationally. There is no minimum number of cases stipulated. A manufacturer staff member can be present for as many procedures as the surgeon feels necessary. They can also advise on laser safety issues and train the operating theatre staff on the laser console. The manufacturer provides certification of participation but does not assess competency. Technique reinforcement can be provided by trained manufacturer staff. The manufacturer reports that it is able to support the increased demand for mentors should uptake increase as a result of the publication of the NICE guidance.

All surgeons stated that a minimum of 10 cases should be done under supervision to reach an adequate standard before independently using the device. However, competency should not be assumed after a set number of observed or supervised cases. This is an individual learning process and some surgeons (especially those with experience with TURP) may take less training to reach competency than others. Evidence of competency could be provided by mentor sign-off. Honorary contracts are needed when either the mentor or the trainee is working outside their employing organisation.

**Developing local documentation**

These are examples developed by NHS trusts using GreenLight XPS which can be used to inform the development of local documentation.
7 Acknowledgements

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Urology consultant, University Hospitals of North Midlands NHS Trust

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8 About this resource

This resource accompanies NICE medical technologies guidance on GreenLight XPS for treating benign prostatic hyperplasia. It was developed using the NICE adoption and impact programme: process guide for adoption support resources for health technologies. It is an implementation tool and discusses and summarises the experiences reported by NHS sites which have adopted this technology and shares the learning that took place.
It is the responsibility of local commissioners and providers to implement the guidance at a local level, being mindful of their duty to advance equality of opportunity and foster good relations. Nothing in this document should be interpreted in a way that would be inconsistent with this.

Click here for more information about the adoption and impact programme.

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