NHS England

GIRFT
GETTING IT RIGHT FIRST TIME

The British Association of Urological Surgeons

BRITISH ASSOCIATION OF DAY SURGERY

BAUN
BRITISH ASSOCIATION of UROLOGICAL NURSES

NHS IMPACT
Improving Patient Care Together

Urology: Towards better care for patients with bladder cancer

A practical guide to improving bladder cancer management

January 2022, updated August 2023

GIRFT is part of an aligned set of programmes within NHS England

Executive summary

Who should read this guide?

This document is aimed at clinicians who care for people diagnosed with bladder cancer, and managers who are responsible for providing or commissioning bladder cancer services.

What is the guide's aim?

The guide describes the key features of a contemporary and comprehensive bladder cancer service and acts as a guide for teams who are committed to high quality care. It will aid the identification of potential 'gaps' in their current service and offer practical advice that will then help the multi-disciplinary team to bridge them.

What the guide contains:

Case for change

1. Introduction
2. Benefits of improving care for patients diagnosed with bladder cancer

Good practice bladder cancer pathway

3. The bladder cancer pathway in diagrammatic form, with explanatory text
4. Key components of high-quality bladder cancer care:
    a. Patient-centred care and shared decision-making
    b. Reliable triage to allow 'fast-track' care for patients with either high-risk non-muscle-invasive bladder cancer (NMIBC) or muscle invasive bladder cancer (MIBC)
    c. Optimising the use of outpatient and day surgery pathways
    d. Good practice in multi-disciplinary working
    e. Using data for quality improvement and quality assurance
    f. Improving care through workforce development
    g. Emerging technologies

Resources to support service improvement

5. Good practice case studies
6. Additional information
7. Suggestions for areas of research that would help inform future quality improvement work on bladder cancer care

Appendix

Full page pathway
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Contributors

Foreword

The 2018 GIRFT national specialty report on urology demonstrated a wide variation in practice across the NHS and highlighted the need for improvement in urological practice in a range of areas. The GIRFT Best Practice Academy aims to identify good practice and provide guidance on service improvement, particularly focussing on common conditions and frequent interventions, thereby maximising impact.

The starting point in the quality-improvement process is the recognition that some aspects of care are suboptimal. While this is apparent to some of those who are delivering services, the GIRFT methodology of data analysis and clinically-led conversations with front-line staff, which culminated in the publication of the National Specialty Report, definitively demonstrated that we can do better. The next step is to understand where we should be heading. NICE guidance provides the clearest and best-researched evidence that can be used to guide practice. However, inevitably, there are gaps in such guidelines when it comes to defining how first-class clinical services should function. These are filled by expert professional opinion, typically provided to urology by the British Association of Urological Surgeons (BAUS) and the British Association of Urological Nurses (BAUN).

The GIRFT Academy developed this guide on the management of bladder cancer to support the implementation of good practice. Unlike other common cancers, progress in clinical outcomes has been more elusive and the associated research, such as the development of novel biomarkers or therapies, lacks the pace of other conditions. Yet there are effective treatments that, when given in a timely manner, can limit recurrence, halt progression or even cure. Furthermore, there is increasing optimism that novel detection methods, tumour profiling and more personalised intervention strategies have the potential to enhance these further.

We hope this document will facilitate progress that delivers improved outcomes and experiences for patients with bladder cancer.

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About GIRFT and the GIRFT Academy

Getting It Right First Time (GIRFT) is an NHS programme designed to improve the quality of care within the NHS by reducing unwarranted variation. By tackling variation in the way services are delivered across the NHS, and by sharing best practice between trusts, GIRFT identifies changes that will help improve care and patient outcomes, as well as delivering efficiencies such as the reduction of unnecessary procedures and cost savings.

The GIRFT Academy has been established to provide easily accessible materials to support best practice delivery across specialties and adoption of innovations in care.

Importantly, GIRFT Academy is led by frontline clinicians who are expert in the areas they are working on. This means advice is developed by teams with a deep understanding of their discipline, generated by the management of services on a daily basis.

The GIRFT programme is one element of the government's response to the recommendations of Lord Carter's report on operational productivity and performance in NHS acute trusts in England, published in 2016. The Carter Report highlighted the GIRFT programme within its theme on quality and efficiency, outlining the orthopaedic GIRFT pilots which identified the scale of benefit to tackling unwarranted variation.

For more information on the GIRFT programme, visit our website at:

www.gettingitrightfirsttime.co.uk

GIRFT Academy has also published urology delivery guides on:

- **Outpatient transformation**
- **Acute stones**
- **Bladder cancer**
- **Kidney cancer**
- **Urological Investigation Units**
- **Urology Area Networks**
- **Strategic framework for recovery**

These are available at: www.gettingitrightfirsttime.co.uk/urology

1. Introduction

The care provided to patients with bladder cancer is not consistent across the NHS. Critically, treatment outcomes can be adversely affected when delayed or when suboptimal care is provided. However, providing care of consistently high quality is not easy as bladder cancer is a complex and challenging condition, with challenging multi-stage diagnostic and treatment pathways.

For most patients diagnosed with bladder cancer, the condition will not be life threatening due to minimal or no tumour invasion into the deeper layers of the bladder wall. For this group of patients, high quality care requires:

- Prompt diagnosis and evaluation
- Disease eradication, or control if new tumours continue to develop (recurrent disease)
- Regular surveillance if there is a risk of tumour recurrence or, more seriously, progression of the disease to a more aggressive form of the cancer
- Careful risk-management with the possible use of adjuvant treatments, typically using agents that are administered directly into the bladder as an instillation
- Excellent communication, so that patients maintain a clear understanding of the nature of their condition and its likely prognosis
- Efficient use of NHS resources, avoiding over-treatment and unnecessary use of hospital admissions
- Lifestyle modifications, including smoking cessation

For a minority of patients diagnosed with bladder cancer, the disease has the potential to be life-limiting, usually because of invasion into the bladder wall and/or spreading to lymph glands or other organs. For some, but not all patients in this group, potentially curative treatment will be available. However, it is widely recognised that the 'window' during which a cure can be affected is time critical. For all these patients at greater risk, high quality care requires:

- Prompt diagnosis and evaluation
- Close liaison between clinicians from different specialties, including urology, medical and clinical oncology, radiology, histopathology, anaesthetics and, in some cases, palliative care
- Timely delivery of curative or palliative treatment, which often involves a combination of chemotherapy and radical surgery or radiotherapy
- Excellent patient support to maximise quality of life in the face of treatment that is often life-changing, or to provide symptom control and holistic care for patients whose condition remains treatable but no longer curable

To produce this guide, a multi-disciplinary team of experts has reviewed existing guidance, as well as collating current and innovative practice from across the country. The guide is designed to highlight aspects of the patient pathway where there are opportunities to drive improvements in care and clinical outcomes. The need to ensure *consistent* delivery of high quality and comprehensive care is also emphasised, as many clinical teams provide very good care in most aspects of patients' pathways most of the time, but few manage to deliver comprehensive best practice all of the time. It is incumbent on clinicians and managers to continually review services and, where improvements can be made, to advocate and drive the changes that will enhance care.

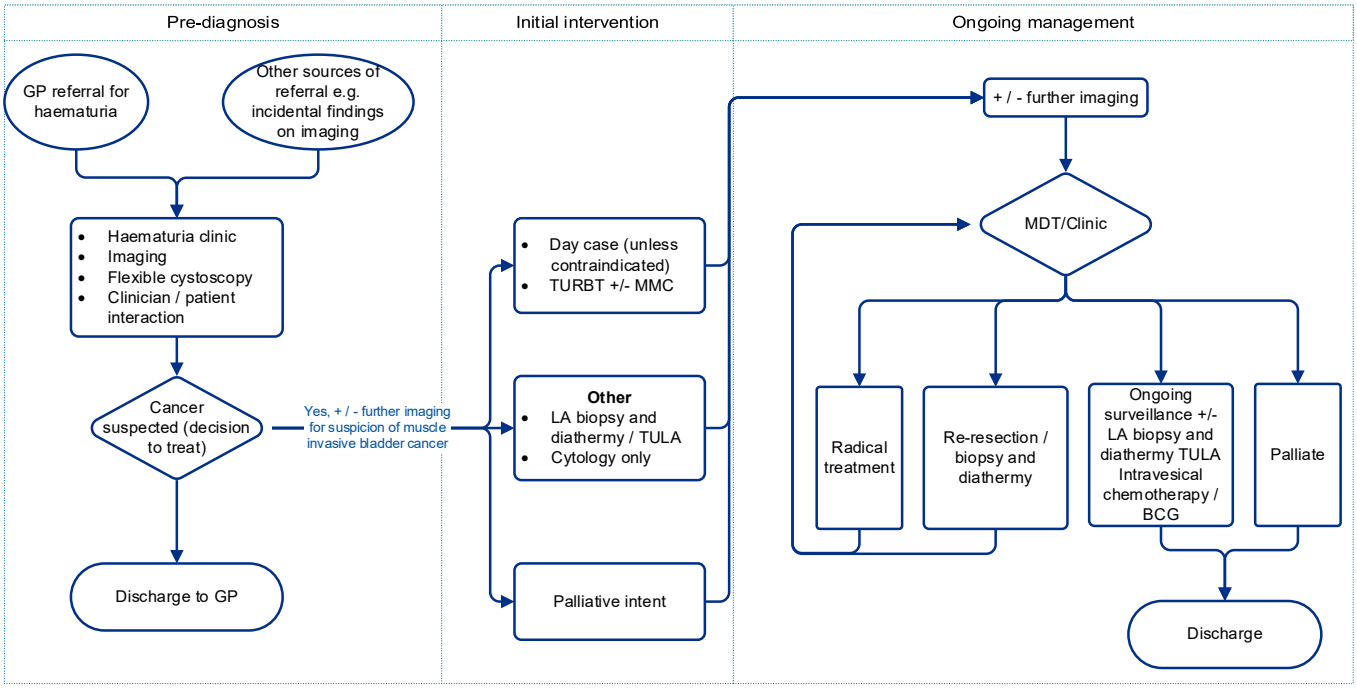
2. Benefits of improving care for patients diagnosed with bladder cancer

There are over 10,000 new cases of bladder cancer diagnosed in the UK annually. Available treatments are effective, and when delivered consistently in a timely manner, will have a positive impact on both patient experience and clinical outcomes. There is great scope to deliver improvement across the bladder cancer care pathway. Potential benefits from raising clinical standards include:

- Reducing mortality and treatment morbidity.
- Improving outcomes and quality of life for patients.
- Using NHS resources more efficiently.
- Focusing clinical time, effort and expertise in a more strategic way.
- Ensuring timely access to care for the most clinically urgent patients.
- Minimising unnecessary interventions in lower risk groups.
- Enabling patients to recuperate in the comfort of their own homes, and in doing so reducing their COVID exposure risk.
- Improving patient experiences, which is of particular importance given that satisfaction amongst bladder cancer patients is known to be low.

3. The bladder cancer pathway

The way that bladder cancer care is provided can be summarised in a flow diagram. More detail is provided in the subsequent paragraphs. A glossary is available in the appendix.



Pre-diagnosis

Patients enter the pathway via their GP (typically presenting with haematuria), or from within the hospital (e.g. as a consequence of an incidental finding on a scan from another department, or having had haematuria or other symptoms picked up in A&E or on a ward.

National cancer waiting times (CWT) guidelines (two week, 31 days and 62 days) have been useful levers to speed the diagnostic and treatment process. However, they have not always ensured that high-risk bladder cancer patients receive potentially curative radical treatment in a timely manner; since the 'clock had stopped' at the diagnostic phase of care (when their tumour is first resected), rather than when curative treatment is initiated. It is vital that urology services monitor the time from referral to the start of radical treatment, as this is the key indicator of timely care for patients whose disease is life-threatening.

The haematuria clinic should be the stage at which risk stratification is first considered and, if improvements in the time to definitive treatment for those with high-risk disease are to be made, such patients should be identified and prioritised here, not least with a streamlined facility for requesting further imaging if required. The haematuria clinic should identify ASA 3 patients with many co-morbidities or very frail or elderly, with a remit to send these patients for anaesthetic review in pre-operative assessment. Anaesthetic review at an earlier stage means that patients for whom regional anaesthesia is contraindicated will be on a local anaesthesia pathway from the outset.

Initial interventions

For the majority of patients, the initial intervention will take the form of an endoscopic resection of the bladder tumour (TURBT); in a minority of patients, unsuitable for bladder tumour resection under anaesthetic, it may be that an outpatient diagnostic and treatment option can be used. The TURBT will provide tumour material and allow a definitive pathological diagnosis to be made. Most TURBT operations can be carried out using day case facilities, but this approach has not yet been adopted broadly across

the NHS. There is an opportunity to increase the use of day care for TURBT without compromising on the quality of surgery provided, thus improving the use of resources.

Ongoing management

Patients are considered for radical treatment (if the disease is high-risk and potentially curable), surveillance (for lower risk disease that is not immediately life-threatening) or palliation (if the disease cannot be cured but symptoms are present, or likely to develop).

Where radical curative treatment is planned, anaesthetic review and assessment will be required from an early stage. Each of these three approaches is likely to require a complex mix of interventions, often involving multiple specialty disciplines. Clearly documented management plans must be formulated through shared decision-making with the patient and agreed by all the clinicians who are providing input, so that the patient and clinicians are clear about the pathway which is being followed.

4. Delivering improvements in bladder cancer management

This section of the guide provides detailed consideration of the key areas for quality improvement in bladder cancer care. Explanatory remarks, aimed particularly at the non-clinician, can be found under each heading, including guidance on what good care might look like. Later stages of the document are organised around these good quality care criteria, so that relevant supporting material, including case studies, can be easily identified by those who are undertaking quality improvement work on their own bladder cancer service.

4A Patient-centred care and shared decision-making

Key quality actions:

- **Review the quality of patient information**
- **Consider how to use patient decision aids**
- **Review staff training for non face-to-face consultation skills**
- **Seek patient feedback about their experience of care**

There are obvious advantages to developing lean and streamlined patient pathways, including reduced waiting times and lessened pressure on stretched NHS resources. However, the danger of increasing efficiency is that compassionate, patient-centred care is replaced by a system that 'processes' patients along a production line of care. Clearly, a balance must be struck, and care taken to ensure that the full extent of a patient's need is met by an efficient and effective service.

For bladder cancer patients, this must be considered in the context that satisfaction with the care received is known to be poor, and certainly below that of other cancer groups, including prostate cancer. We must work to address and improve this.

The early introduction of a named clinical nurse specialist (CNS), as well as attempts to keep care under the same 'team', will enhance connectivity with the department. In the current climate, when patients may be afforded less opportunity to interact with their clinical team face-to-face due to increased use of virtual communication, there is evidence that video calls, rather than telephone calls, provide a more satisfactory experience for both patient and clinician.

Particular attention is needed to retain patient-centredness during multi-disciplinary team meetings, where key professionals are present in the absence of the patient that they represent.

Some aspects of the pathway are relatively straightforward, with few options requiring consideration. However, there are areas where the most appropriate decision for a patient is contested. Patients need to be guided through these complicated areas in a sympathetic manner to ensure that their decision is appropriately informed. Patient information, be it written or provided by other means, should be up to date and provided in a comprehensible form. Specifically, patient decision aids are established in other conditions and have been demonstrated to assist consent and reduce clinician bias.

Continuity of care is especially important for high-risk non-muscle invasive bladder cancer (NMIBC) patients, where engagement with the department (and potentially across departments within a network) is needed to identify recurrence and progression, and to ensure compliance with treatment protocols.

Finally, improved multi-disciplinary working will enhance access to ancillary services and palliative care when required.

Read our **case studies on patient-centred care**

4B Reliable triage to allow 'fast-track' care for patients with high-risk NMIBC or MIBC

Key quality actions:

- **At the point of diagnosis (e.g. flexible cystoscopy), ensure that every patient with suspected high-risk bladder cancer is put on an intensive fast-track pathway, with close monitoring of progress**
- **Ensure that low-risk cases continue to meet cancer waiting timelines**
- **Ensure that high-risk patients undergo their TURBT to a defined cancer network standard, and where possible performed by a sub-specialist clinician**
- **Ensure that where possible clinic consultations take place with a sub-specialist clinician to allow full and detailed counselling**

At the point of diagnosis of a bladder cancer, an individual tumour can fall anywhere on a wide spectrum from those that will carry little threat to the patient's well-being, through to potentially fatal disease, and finally, those that are incurable at presentation and can only be managed with a palliative intent. Despite this, patients start (and often continue) on a common pathway.

More effective working can enable higher risk cases to be 'fast-tracked' through the system so that their definitive treatment is delivered as quickly as possible. Lower risk cases should not be neglected as a result but are unlikely to come to harm if their care follows a standard cancer target pathway. In some situations, such as when there is already imaging available at tumour presentation, it may be possible to identify high-risk tumours prior to the first interaction with the department. In other instances, such tumours can be identified at the point of attendance in a haematuria clinic.

The importance of early high-risk identification is emphasised in NICE guidance, which recommends that cross sectional imaging is requested prior to first TURBT if MIBC is suspected. A key improvement of the 2020 Cancer Waiting Time guidance was to prevent patients with MIBC or high-risk NMIBC being disadvantaged by their first TURBT counting as definitive treatment.

Many progressive departments have mechanisms to specifically track such patients. Subject to availability, this allows their TURBT to be carried out by a urologist with a sub-specialist interest in the condition, with the best possible chance that the tumour resection will be as complete as possible. The surgeon will also be able to make a clinical assessment as to the feasibility of radical surgery (cystectomy) being carried out. High risk patients for major surgery should be flagged to the anaesthetist at the earliest stage possible, such as at haematuria clinic or initial pre-operative assessment, for a discussion on suitability, risks and any investigations or prehabilitation which could improve the outcomes for the patient from major surgery.

The fast-track approach for high-risk patients must cover the entirety of what will be a complex, multi-stage pathway. A well-functioning MDT process will allow such patients to be identified and tracked, so that they can be discussed in a timely manner. They will need to have their imaging and histological review prioritised, and have their follow-up with the appropriate sub-specialist, so that treatment options can be fully discussed. The role of neo-adjuvant intravenous chemotherapy will need to be considered. Discussions about cystectomy will include a conversation about the potential benefits and risks of different types of reconstructive surgery (ileal conduit or neo-bladder construction). The provision of joint clinics with urologists, nurse specialists and oncologists significantly aids these processes.

Read our case study on fast track care for high-risk patients

4C Optimising the use of outpatient and day surgery pathways

Key quality actions:

- **Ensure that the default option for TURBT operations is day surgery**
- **Review the TURBT pathway to ensure there are no obstructions to day case surgery (e.g. intravesical chemotherapy given in theatre, nurse-led discharge etc)**
- **Consider developing enhanced outpatient facilities for flexible cystoscopy-based treatment, including laser and diathermy use**

Advances in day surgery care, as well as technical innovations, provide significant opportunities to move care from inpatient to day case facilities and, in selected patients, into the outpatient environment.

TURBT

TURBT is the mainstay of diagnosis and a significant component of the treatment of bladder cancer. It has traditionally been performed via an inpatient pathway. However, it is possible to perform this procedure in the day case setting for most patients, with the following advantages:

- Improved patient experience
- Reduced risk of hospital acquired infection and venous thromboembolism
- Reduced cancellation rates and shortened waiting times
- Financial savings

The 2018 GIRFT National Urology Report highlighted that eight providers carried out more than 40% of TURBT procedures in a day case setting. The clinicians involved were confident, as a result of audits of their practice, that quality of care was not compromised, and re-admission rates were not increased significantly. Model Hospital data demonstrates significant improvements since this report, with the highest performing trusts having day case rates of over 70%. There is an opportunity for the vast majority of units, with similar attention to auditing, to significantly reduce the number of inpatient episodes for this procedure. Day case rates can be improved through the involvement of daycase minded urologists and anaesthetists, the use of short acting spinal agents and specific management plans for patients.

Ambulatory biopsy and treatment

In many departments, there has been a move towards more NMIBC interventions being carried out in an outpatient setting, highlighting what is achievable using the flexible cystoscope. Advancements in instrumentation and treatment modalities, allied with education of practitioners, mean that a significant proportion of biopsies for recurrent disease can be carried out safely at the time they are discovered, with diathermy or laser used for haemostasis and/ or tumour ablation. Effective scheduling of appropriately selected patients into specialist flexible cystoscopy clinics is needed, as are equipment provision and availability of appropriately trained and skilled staff. An increase in the use of these techniques will offer a reduction in the anxieties, morbidity, costs, and pathway delays associated with the need for admission.

Outpatient transurethral laser ablation (TULA) of bladder tumours is approved by NICE as a safe, cost-effective alternative to traditional general anaesthetic (GA) endoscopic treatment for the diagnosis and management of some NMIBC cases. This approach is particularly suitable for low-risk disease, where the chance of progression to a more aggressive form of cancer is low, but the risk of tumour recurrence is high. This service should be available in all units that provide bladder cancer diagnostics, surveillance and treatment.

Read our case studies on the use of outpatients and day case pathways and view an example daycase pathway

4D Good practice in multi-disciplinary working

Key quality actions:

- **Review, and fully adopt, the recommendations of the NICE 'Streamlining MDT Meetings' guidance**
- **Avoid the need for double reporting of imaging and pathology specimens by ensuring that the first report meets with MDT protocols and standards**
- **Audit MDT functioning against the Cancer Alliance Network standards**

The multi-disciplinary team meeting (MDTM) is a cornerstone of cancer care in the UK. The MDTM aims to confirm diagnoses, recommend appropriate treatment options, and ensure support for patients throughout their cancer journey. It also plays an important role in quality assurance, not least when multiple units contribute.

All patients diagnosed with bladder cancer require initial discussion in their local MDTM, with onward referral to the regional specialist MDT if indicated within the NICE Improving outcomes in urological cancers framework. More recent guidance from NHSE/I has emphasised the need for MDTM time to be used effectively through a move to more streamlined meeting organisation.

In line with Streamlining MDT meetings guidance, standards of care should be determined within each Cancer Alliance to ensure cases for protocol-driven discussion can be readily identified. This permits more in-depth discussion of cases deemed as complex. This may require the re-allocation of resources to support clinicians who perform pre-MDT review of appropriate cases.

Information from GIRFT departmental visits indicates that many MDTs are structured so that pathology specimens and radiological images are, in effect, re-reported by sub-specialist histopathologists and radiologists. This double reporting is potentially wasteful. All images or material should be looked at by someone working to accepted protocols and standards, so that a single, reliable report is issued for each investigation.

Local and specialist MDT meeting standard operating procedures within each trust should be reviewed annually. A register of attendees should be kept, ensuring each meeting is quorate. In addition, adherence to each Cancer Alliance network's bladder cancer guidelines should be audited.

Read our case study on good practice MDT working

4E Using data for quality improvement and quality assurance

Key quality actions:

- **Develop a set of key metrics that will be prospectively collected and audited by the bladder cancer service team**
- **Ensure that these key metrics include those on model hospital, and review the model hospital data at regular intervals**
- **Participate fully in BAUS audits that relate to bladder cancer care**

The need to provide definitive bladder cancer treatment in a timely manner is important. Cancer waiting time targets monitor and drive this effort, with resources allocated to measure performance.

Beyond these targets, quality control is an essential part of clinical processes. Variation in surgical practice and departure from evidence-based guidelines are recognised causes for variability in bladder cancer outcomes. Clinical pathways must include elements of quality assurance to improve outcomes. High quality, reliable and prospectively collected clinical data are vital to quality control, in order to:

- Measure clinical effectiveness and service efficiency to reduce wastage
- Facilitate benchmarking
- Standardise practice and smooth variance
- Demonstrate guideline adherence
- Support training
- Facilitate collaborative research
- Maintain and increase patient confidence in their healthcare provider

The Scottish quality performance indicators programme is an exemplar for quality improvement in bladder cancer outcomes. Patients from the rest of the UK would benefit from universal adoption of the Scottish approach. Until that happens, individual bladder cancer services might consider using the metrics from the Scottish programme to evaluate their performance.

Whilst the development of a full-scale quality performance indicator programme should be a longer-term ambition, in the interim there is a range of relatively simple steps that urology units can take to identify, monitor, and track performance and efficiency in relation to the bladder cancer pathway:

- Use of model hospital bladder cancer metrics (number of procedures, length of stay, readmission rates, day case rates)
- Use of the BAUS website audit tool to monitor key performance indicators
- Participation in BAUS Section of Oncology and the British Urology Researchers in Surgical Training (BURST) collaborative audits

Augmenting information from the model hospital data set with insights from other initiatives, will help urology teams develop a more nuanced understanding of areas where they can drive improvement in relation to bladder cancer. This should have a positive impact on patient experience and outcomes.

Read our case study on using data for quality improvement

4F Improving care through workforce development

Key quality actions:

- **Review the roles and skills of the specialist nursing and allied professionals workforce**
- **Develop a departmental staff development plan that includes details of how theoretical and practical training will be delivered**
- **Review the place of newer technologies within bladder cancer management pathways and develop a plan for introducing new techniques, as appropriate**
- **Consider how simulator training can be accessed and used for staff development**

Bladder cancer care is delivered by a team of individuals from different disciplines. High quality care will only be delivered if the whole team is working in unison, and all members have the necessary expertise. Investment in staff training is therefore essential.

Expanding staff roles and skill sets

The role of the advanced nurse practitioner (ANP), surgical care practitioner (SCP), clinical nurse specialist (CNS), and nurse consultant are well established within urological practice. Nurse-delivered diagnostic flexible cystoscopy and bladder instillations administration are undertaken in nearly all departments. However, some units have progressed to a nursing repertoire that includes ureteric stents retrievals, bladder biopsies, cysto-diathermy, intra-detrusor Botulinum Toxin A injections, and laser ablation of bladder tumours, all via the flexible cystoscope.

Appropriately qualified nurses should be enabled to undertake an extended range of clinical tasks to build capacity and resilience in the bladder cancer service. An empowered nurse influences productivity, staff retention, patient safety, and quality of care. Their grounding in the culture of nursing also helps to ensure that care is delivered with compassion.

Nurse-led clinics allow for advanced practice in assessment, diagnosis, treatment, and counselling. This enables role development, but also has a demonstrable positive impact on patients' continuity and quality of care, delivering a more effective and efficient service. This is especially important in a disease area where patient experience is known to be poor.

Delivering new services, treatments, and pathways

A framework for the delivery of bladder cancer services (diagnosis, treatment, and follow-up) is outlined in NICE Guidance NG2. The guidance covers several areas where there have been technological developments, including photodynamic diagnosis (PDD) and narrow-band imaging (NBI). Such techniques require training and investment to facilitate their use. Similarly, increasingly sensitive and specific urinary biomarkers may revolutionise diagnostic and surveillance pathways and their introduction would require significant investment in both staff training and technology.

TURBT is the mainstay of initial diagnosis and treatment, but this may also change. En-bloc and laser resection already have demonstrable comparable oncological outcomes, with reduced complications when compared to conventional TURBT. Should prospective, randomised, controlled trials demonstrate superiority in terms of reduced complications and/or improved oncological outcomes, consideration will need to be given as to how to modify practice, with implications for training.

Finally, increasing pressure on NHS services requires a re-think of how services are configured. For example, moving the majority of TURBT procedures to day surgery pathways will require the sharing of best practice, staff training and BADS pathways on increasing the efficiency of daycase pathways.

Investment in technology and infrastructure to support training and quality improvement

Technological advances continue to offer new and innovate ways to improve care and performance. Simulation plays an increasing role in training. A significant number of complications and adverse outcomes occur during the initial learning curve for any new procedure or technique. Simulation allows a proportion of this learning to be performed in a safe training environment. Simulation models can allow learning in open, endourological, and robotic procedures. The role of simulation in the UK urology curriculum is established with the national 'Urology Bootcamp', which forms a mandatory part of a urologist's training. In addition, a range of other courses are available for both trainees and consultants.

Digital infrastructure, such as the model hospital and the national consultant information programme (NCIP), allow for benchmarking and feedback of outcomes. In the future, these platforms could be enhanced to enable groups to undertake audits and share information about good practice and quality improvement.

Read our case studies on workforce development

4G Emerging technologies

Key quality actions:

- **Be open to evaluating advancements in technology and data-processing to enhance bladder cancer care**

In recent years, there has been a dramatic increase in technologies that may enable improvements in care for patients with bladder cancer. This applies to the diagnostic, therapeutic and surveillance parts of the patient pathway. Some are ready for clinical evaluation or adoption whilst others, such as artificial intelligence and machine learning, are areas of interest that are yet to have their clinical utility fully described. It is likely that our pathways will need to respond to and integrate some of these changes, meaning that clinicians involved in the care of patients with bladder cancer should keep update to date on the role of emerging technologies.

Current advances in diagnostics, treatment & surveillance

Within the diagnostic sphere novel urinary biomarkers, exploiting various –omics, may aid bladder cancer detection and reduce the need for cystoscopy and hospital-based diagnostics.

Enhancements in imaging, such as pre-operative MRI, may improve or replace conventional T-staging in patients with high-risk bladder cancer.

The integration of next generation digital imaging, endoscopes and flexible scopes have increased the ability to both identify and treat bladder cancer. Adjuncts, such as narrow band imaging, photodynamic diagnosis, and optical coherence, may improve outcomes further. However, as the recent PHOTO trial highlighted, the application of technology may be within specific subgroups and not applicable to all. New techniques, such as *en bloc* resection and TULA, have been made possible by the advent of digital scopes and next generation lasers. With 80% of NMIBC being low-risk, outpatient-based treatments, such as TULA, also offer the potential to simplify pathways and improve cost effectiveness.

Continued developments in molecular sub-typing of bladder cancer is another area that may assist in classification, risk stratification and a more personalised treatment plan for patients. Likewise, the molecular signature of tumours may indicate suitability for novel therapies such as immunotherapy or a tumour-agnostic approach to treating disease-relapse.

Exploratory areas with potential to alter patient care

AI applications may also help to automate and improve some current processes. AI has already been shown to aid both digital cytological and histopathological whole slide image (WSI) interpretation. Machine learning applied to WSI histopathology may be beneficial as a diagnostic aid for complex/rare histology, automate some reporting, and provide quality assurance. AI has also been applied to endoscopic imaging with deep learning neural networks shown to identify bladder cancers in >90% of cases.

Read our case study on new ways of working and technology

5. Good practice case studies

For each of the seven areas for quality improvement described in section 4 (see above), a number of good practice case studies have been collated. These studies draw on the experience of teams that have already achieved quality improvement in the highlighted area of bladder cancer care.

5A Patient-centred care and shared decision-making

Developing powerful patient information materials

Fight Bladder Cancer patient organisation

Motivation and aims

A multi-stakeholder bladder cancer roundtable in 2017 identified improved patient information materials as a key requirement for improved patient experience. Traditionally, regardless of the type or severity of their cancer, most patients were given a dense book on bladder cancer and pointed towards specific pages that would be relevant to their situation, which was deemed highly unsatisfactory.

Fight Bladder Cancer decided to produce patient-led, digestible patient information materials that were more easily tailored to each patient's individual situation.

What was done

Working closely with patients and clinicians, Fight Bladder Cancer has developed ten booklets on different aspects of bladder cancer, including understanding TURBT, stomas and neobladders. An illustrator was used to ensure that the diagrams were easily understandable and compelling. As well as evidence-based medical information, the patient voice has been highlighted throughout the materials, including specific tips and advice for other patients. The booklets are available on the Fight Bladder Cancer website and are also posted to UK patients for free to ensure that digitally excluded patients can access the same materials.

Key points of good practice

- Joint decision-making has been emphasised, with provision of tools and example questions for patients to ask their clinicians
- The materials are made accessible for patients through use of clear and easy to understand language, supplemented with illustrations and photos
- The patient voice is strong throughout the material
- The information is available to all patients, whether online or as posted, printed copies
- The team which developed the material encompassed a wide range of skills (patient experience, clinical, design) to maximise quality

Successes/lessons learned

- A recent Fight Bladder Cancer survey found that 96% of people surveyed would recommend the booklets to someone else with bladder cancer
- Nurses who have recently moved to bladder cancer teams are using the booklets for their own education
- Ensuring awareness of the documents amongst medical professionals and patients has been a challenge during the pandemic. The Fight Bladder Cancer team continue to think of innovative ways to raise awareness, such as printing business cards for nurses with the charity's details on the back

Ensuring continuity of care for high-risk NMIBC cancer patients unfit for cystectomy

Cardiff and Vale University Health Board, University Hospital of Wales, Cardiff

Motivation and aims

High-risk NMIBC patients are a heterogenous group who often recur and progress. A significant proportion of these patients will not be suitable for major surgery (cystectomy). Given the limited treatment options available, this cohort is at risk of being 'left behind'. Developing and maintaining a core clinical group looking after these patients ensures a safe, consistent, and standardised approach.

What was done

A group of clinicians made up of specialist nurses, nurse cystoscopists, 'pre-habilitation' physicians and anaesthetists, as well as bladder cancer clinicians, was formed.

Close endoscopic surveillance as well as suitable chemotherapy (Mitomycin, BCG, re-challenge, gemcitabine) regimes were initiated.

Those with 'prehab' potential were actively encouraged to take part in a programme to improve exercise tolerance.

Those with disease progression, but also improvement with prehab, underwent safe, major resectional surgery.

Successes/key points of good practice

- The service was introduced under the leadership of a cancer nurse specialist in 2014
- The majority of patients have been managed safely with endoscopic surveillance under the same team
- Of the 10% who progressed but also had potential for prehab, proactive management was via a prehab programme with demonstrable improved exercise tolerance (CPET testing), and resulted in successful major surgery

Lessons learned

- Establishing a core team interested in this patient group is essential
- Early engagement with all stakeholders enables identification of patients suitable for prehab
- The leadership and service-deliver of the CNS team, ensures continuity of care and reinforces to patients the importance of close follow-up and self-directed exercise plans
- Whilst generally regarded as 'not fit for major surgery', a proportion of such patients do have the potential to improve their fitness and undergo major surgery when provided with the right support

5B Reliable triage to allow fast-track care for MIBC and high-risk NMIBC patients

Identifying high-risk patients in order to streamline their care pathway

Kingston Hospital NHS Foundation Trust

Motivation and aims

Given that, particularly for high-risk disease, delay in management results in adverse outcomes, the aim was to identify such cases early in the pathway and expedite care to minimise the time taken to make a diagnosis and commence treatment.

What was done

We changed from consultant to CNS-led triage of patients who had been referred to the haematuria clinic, also enabling the CNS to request risk-based imaging prior to clinic attendance. Ultrasound (US) was used to investigate non-visible haematuria and computer tomography urogram (CTU) was requested for patients with visible-haematuria). Once the date for imaging was known, the haematuria clinic attendance was arranged for the following week, so that the clinician had the imaging results available.

Additionally, the CNS would automatically be emailed results by the electronic patient record system and could act on the imaging findings in advance of the clinic. For example, the case could be referred for MDT discussion, the patient could be booked straight for TURBT if a bladder cancer was seen (and be told of this in haematuria clinic whilst avoiding a flexible cystoscopy), relevant patients could be diverted to a two week wait (2WW) renal cancer clinic, and/or additional imaging could be requested for suspected MIBC (Chest CT for metastases/ MRI for local staging).

Successes/key points of good practice

Prior to the intervention, imaging would be requested on the day of the haematuria clinic attendance, and the patients informed of the result in the CNS's clinic two to three weeks later. 95% of patients were waiting three to six weeks from referral to receiving their imaging result. This resulted in a breach of cancer waiting time targets, most significantly, the 62 day wait for definitive treatment for MIBC/ high-risk NMIBC, with the known adverse risks that result from such a delay. Moreover, patients would often undergo TURBT without cross-sectional imaging being available for the surgeon to guide the operation +/- mandate the need for ureteroscopy if upper-tract disease were suspected.

- Since, the above changes were introduced, 95% of patients have imaging prior to haematuria clinic attendance
- Same-day US is available for the small number of patients attending who haven't been scanned ahead of the haematuria clinic attendance (they are called with the result a week later)
- The use of cross sectional-imaging prior to TURBT (in the absence of post-resection artifact) allows for more accurate staging
- Accurate documentation (we use an electronic form) at flexible cystoscopy is an adjunct for the surgeon at TURBT

Lessons learned

- A CNS (or team of CNSs) with ionising radiation medical exposure regulations (IRMER) training enables appropriate triaging, and improved pathway performance, especially for those with high-risk disease
- This improves cancer waiting time performance
- Setting up and maintaining such a service, involves effective working relationships with the radiology department, and a reliable system for requesting imaging and receiving notification of results
- Contingency plans must be in place to allow for cover of the CNS responsible for co-ordinating activity when they are on leave
- The value of bladder cancer-specific CNSs is demonstrated

5C Optimising the use of outpatient and day surgery pathways

Peri-operative pathway considerations for day case bladder cancer surgery

British Association of Day Surgery (BADS)/ Torbay and South Devon NHS Foundation Trust

Motivation and aims

Achieving high quality day surgery outcomes requires attention to detail in all aspects of the peri-operative pathway. An excellent bladder cancer pathway will ensure that patients requiring TURBT are defaulted to a day case pathway and are only excluded if a full preoperative assessment deems inpatient care absolutely necessary. Clinicians should be educated in the current acceptance criteria for day surgery so that patients are not unnecessarily excluded.

What was done

Recommendations from the national day surgery delivery pack (a joint publication from GIRFT, BADS and the Centre for Perioperative Care (CPOC)) were introduced across the entirety of the bladder cancer pathway. Crucially, the day surgery service should, where possible, be managed independent of inpatient facilities to enable it to continue even when the hospital is under severe operational pressure.

Booking: Ensure patients are booked on a day case pathway: patients planned for inpatient surgery are much less likely to achieve same-day discharge and do not count as day case activity in hospital statistics. They are also much more likely to be cancelled on the day of surgery if it is perceived that they may require an overnight bed which is not available

Patient preparation and acceptance criteria:

- All members of staff must be versed in preparation of a patient for day surgery to ensure that the same message is given by all members of the multi-disciplinary team
- Current guidance from BADS should be followed for patient selection. In particular, patients who live alone are often able to be day cases, as are the elderly and those with significant co-morbidities who may benefit from a day case pathway rather than inpatient care

Facilities and staffing: where possible these procedures should be undertaken in a dedicated day surgery environment to improve efficiency and outcomes

Admission: patients should be admitted as close as practicable to the time of surgery to avoid extensive preoperative waits and prolonged fasting

Fasting: the importance of pre-operative hydration is increasingly recognised in avoiding a number of post-operative symptoms including, nausea and vomiting, headache and dizziness

- Patients should be encouraged to have a cup of tea or coffee with milk (if preferred) up to two hours pre-operatively (1 hour before leaving home for hospital)
- Patients should be encouraged to drink water freely until time of sending for theatre

Premedication: simple oral analgesia should be administered pre-operatively. This might include paracetamol 1g, ibuprofen (Slow Release) 1600mg if eGFR>60

Anaesthesia: short acting spinal anaesthetic agents (hyperbaric prilocaine or 2-chlorprocaine) are eminently appropriate for these cases and avoid the risks associated with general anaesthesia in the elderly and those with cognitive dysfunction. If spinal anaesthesia is contraindicated, low dose propofol TCI maintaining haemodynamic stability and avoiding airway instrumentation (use of capnomask) is an ideal technique

Recovery and discharge: Pathways for instillation of mitomycin, discharge with catheter if required and ambulatory/ community TWOC services should be established

- Standardised packs of take-home medication should be used e.g. paracetamol 1g (four times a day) plus ibuprofen 400mg (four times a day) if tolerated
- Nurse-led discharge should be employed according to guidance published by BADS
- Patients should be telephoned the day after surgery and audit data gathered, in particular to assess pain scores, nausea scores and patient satisfaction

Successes/key points of good practice

- 80% day case rate (sustained over many years)
- 8% unplanned admission rate (4th best performer nationally)
- Excellent patient satisfaction (99% patients report high satisfaction scores)
- 100% patients report liking a day case pathway
- <1% patients report significant symptoms post-operatively (pain, bleeding, nausea and vomiting)

Lessons learned

- Engagement of the multi-disciplinary team is pivotal to the success of this pathway
- All clinicians responsible for listing patients for surgery must follow the default to day case protocol
- Protocols for management of post-operative catheters either via community TWOC services or easy access to hospital-based TWOC clinics are essential
- Trying to run this service via an inpatient urology ward has led to low rates of day case discharge in some centres. The role of an expert day surgery team, confident in nurse-led discharge, is essential to its success

Top tips for implementing the same-day discharge bladder cancer pathway

NHS England London Region

Criteria

The pathway applies to **all** patients with suspected bladder cancer with a decision to treat. Patients undergoing a TURBT procedure are to be treated in a day case setting as the default option. The pathway is based on NICE guidelines and GIRFT recommendations.

Please embed this thinking within your haematuria clinics and flexible cystoscopy lists.

Key same-day discharge TURBT exclusion criteria:

1. Unstable medical conditions
   - Unstable ASA 3 and above consider an inpatient stay. May consider a different operation for patients at unstable ASA3 and above, such as LA TULA
   - Tumour factors – large solid bladder tumours or multiple large tumours
   - Complex medical needs (Consider LA TULA)
   - Pregnant women
2. Social situation
   - Patients must have a competent adult with them for 24 hours after anaesthesia. Consider partnering with a local charity to provide a sitting service for patients who do not have support at home
3. Inability to manage catheter
   - Expected poor compliance pre- and post-procedure
4. Intra / post-operative complications, such as ongoing heavy bleeding or bladder perforation

If a patient falls within the TURBT exclusion criteria, an outpatient TULA could be considered (if appropriate).

The following points should be considered for TURBT procedures taking place in a day case setting:

- ASA grading – patients up to stable ASA3 can proceed with day surgery.
- Patients with diabetes should not be excluded from day case surgery but consider if additional support is required.
- No upper age limits
- Consider a careful pre- and post-operative management plan for patients on anticoagulants, to enable a day case procedure.
- Consider short acting spinal anaesthetic for patients without support at home. Requires careful planning but may support day case discharge (Note: this needs to be agreed with Trust management).
- Patients must have the ability to manage a catheter.
- Tumour factors - risk of bleeding with larger tumours can be managed. Consider using bipolar / plasma technology to provide better haemostasis. Use irrigation in recovery for a short period if required.

Booking

Please embed booking TURBTs as default day-case procedures within your haematuria clinics and flexible cystoscopy lists. A clear booking process must be established to ensure patients are coded correctly.

Top tips to consider:

- Run themed TURBT theatre lists to help improve efficiency, create a day-case mentality within the team and support training opportunities.
- Consider the position of TURBT patients on the list. This can help ensure patients are discharged on the same day if the day unit does not operate with extended hours (after 5pm).
- Consider listing larger tumours first on the list to allow time for irrigation if required.
- Ensure patients are coded as a day-case, even if the procedure is in main theatres. If limited day unit capacity, ensure pathway are set up for day case booking and discharge. Treatment will not be recorded correctly if booked as an inpatient with 0 days stay.

Pre-operative Assessment

Ensure patients are pre-assessed and fully understand the implications of a day-case pathway. Aim to review the pathway mapping regularly and consider patient feedback.

Admission

- Admission to be as close as possible to the time of surgery to avoid extensive waiting times and prolonged fasting. Patients appreciate staggered admissions
- Recommend immediate single instillation of mitomycin-C in theatre, unless contra indicated (EAU Guidelines, 2022).
- Mitomycin-C to be available in theatres to enable instillation whilst the patient is in theatre.
- Ensure there are training sessions available for new starters and the wider team

Oversight

Consider using a tracking dashboard / database.
Consider embedding the following checkpoints for TURBT, to maintain oversight of service:

- Review TURBT/TULA waiting lists, look at the bladder maps from flexible cystoscopy and list patients appropriately. Have a process in place to fast track patients with most aggressive looking tumours to speed up diagnosis and definitive treatment of muscle invasive bladder cancer.
- Post BCG review, check if the procedure is appropriate for the patient – consider specialist flexible cystoscopy list with optical enhancement and urine cytology.
- Rigid cystoscopy and biopsy for red patches in bladder, consider urine cytology and repeat flexible cystoscopy in outpatient setting by experienced practitioner unless highly suspicious of, or previous history of carcinoma in situ.
- Review patients at MDT.

Discharge

Points to consider:

- Ensure there is a contingency pathway if a patient requires an inpatient stay after the procedure
- Aim to discharge without catheter
- Consider how to maximise TWOC clinic capacity, so any patient sent home with a catheter can have it removed in 48-72 hours.
- Patients may require a catheter if:
  - Tumour around bladder neck
  - Deep or large resection
  - Difficulty passing urine in recovery

Follow up

The follow-up recommendations in the pathway are based on NICE Guidelines (other guidelines such as EAU guidelines exist).

Aim for all surveillance cystoscopies to be flexible cystoscopies in an outpatient clinic setting, unless clinical / patient factors dictate otherwise.

Supporting documents

NICE (2015). *Bladder cancer: diagnosis and management*. 1 Recommendations | Bladder cancer: diagnosis and management | Guidance | NICE

EAU (2022). *EAU Guidelines on Non-muscle-invasive Bladder Cancer.* EAU-Guidelines-on-Non-Muscle-Invasive-Bladder-Cancer-2022.pdf (d56bochluxqnz.cloudfront.net) p22.

Centre for Perioperative Care (2021). *Guideline for Perioperative Care for People with Diabetes Mellitus Undergoing Elective and Emergency Surgery.* CPOC-Diabetes-Guideline2021.pdf

GIRFT (2022). *Bladder Cancer Guidance*. https://www.gettingitrightfirsttime.co.uk/wp-content/uploads/2022/01/Urology_2022-01-12_Guidance_Bladder-cancer.pdf

Available for download on FutureNHS.

Day case TURBT and its impact on achieving the bladder cancer best practice pathway

Portsmouth Hospitals University NHS Trust

Motivation and aims

The benefits of day case surgery are multiple for both the patient and care-provider. TURBT is a commonly performed procedure that is an essential component of the diagnosis, staging and treatment of bladder cancer, where quality of care provided in a timely manner impacts on outcome.

We worked to make the day case paradigm the default for TURBT in our hospital, without compromising on quality performance indicators.

What was done

We had already established day case bipolar TURP working and benefited from commonalities in the pathway (e.g. easy availability of appointments for TWOC, recovery staff being well versed in managing post-operative irrigation). A key intervention was enabling the instillation of on-table mitomycin C, alongside education of the recovery staff in how to drain bladders and handle disposables safely.

It was essential that the expectation of patients and hospital staff alike was that those deemed appropriate for day surgery would be managed in this way, and that this was reinforced throughout the pathway. At the same time, the ability to convert to an inpatient stay where required was readily available. Once the majority of patients undergoing TURBT were managed in a day case setting, the pathway became increasingly easy to oversee as all concerned considered this to be 'normal'.

An essential element was checking that we were providing effective care, that wasn't compromised by patients having a day case, as opposed to inpatient, procedure (see below).

Successes/key points of good practice

Outcomes from a year's worth of consecutive, elective TURBTs (n=172), 80.2% of which were provided as day case, were reviewed. We saw a similar readmission (7.2% vs 6%), and detrusor muscle in specimen rate (65.5% vs 60%) between the day case and inpatient cohorts respectively, whilst a higher single dose mitomycin C rate for the day case group (70.0% vs 45%) is probably related to these patients having less haematuria. Using a strategy where day case working is the norm, we had recurrences at 3 months of 6%, 3% and 14% for low, intermediate, and high-risk tumours respectively.

Data from model hospital suggests that we are maintaining a similar level of day case activity (without a rise in readmissions). This approach was especially beneficial during the worst of the pandemic, when the availability of inpatient beds was greatly reduced, allowing us to maintain an effective service despite significant restrictions.

Day case TURBT appears to be increasingly common across Wessex, and, having presented and published our results, we have been visited by clinicians from outside the region, wishing to achieve similar day case performance.

Lessons learned

- On table provision of mitomycin C is a game-changer
- Our day case facility closes at 10 pm (Monday to Thursday) and is part of the main hospital. Other units with different arrangements may benefit from ensuring that such cases are early on their lists
- The ability to convert to an inpatient stay, though rarely required, is essential
- Committed and experienced clinicians need to be involved to make this successful
- Provision of TWOC appointments is essential: patients shouldn't be admitted just because they need a catheter
- A culture of continuous quality improvement (with audit of QPIs) must be encouraged

In theatre single post operative instillation (SPI) of chemotherapy after TURBT

South Tees NHS Foundation Hospitals Trust

Motivation and aims

Immediate SPI of chemotherapy after TURBT is recommended by all international guidelines. The instillation should preferably be given within six hours, and always within 24 hours.
Instillation in theatre has several advantages:

- Avoidance of delays due to busy wards or pharmacy department
- Facilitates day case TURBT
- Reduced patient discomfort as for much of the dwell time the patient is still under the effects of anaesthesia

What was done

A working group of representatives from pharmacy, aseptic services, urology, theatre and recovery teams, and post-op ward nurses was set up. A protocol was developed by consensus to ensure safety and engagement. Commercially available closed delivery systems were utilised to avoid spillage. 'Mitomycin instillation' was recorded routinely on theatre operation lists and on template consent forms. Template operating notes include time of drainage of chemotherapy. Training was provided by pharmaceutical representatives to surgeons and theatre teams. Initially there was a list of nominated trained individuals to be present at all lists and gradually these 'champions' trained others. A 'safe working procedures' document was developed to detail actions in the event of spillage.

Successes/key points of good practice

This service was introduced in 2009 and has delivered immediate in theatre SPI to hundreds of patients without a patient safety incident. An audit of TURBT procedures at the trust in 2019-2020 demonstrated that 80% of patients were given SPI chemotherapy within 6 hours and no SPI occurred outside the theatre suite. Successful transformation to day case TURBT has been partially facilitated by in-theatre SPI. The use of the WHO checklist and template operation note has further enhanced safety.

Lessons learned

- Involvement of all key stakeholders at the outset facilitated understanding of patient benefits and processes
- Good communications between surgical administration teams, theatre staff and pharmacy are required to ensure that doses are available in theatre
- Use of closed systems prevents spillage
- Use of the WHO checklist helps to communicate effectively with recovery teams and ensure timely drainage

5D Good practice in multi-disciplinary working

Setting up joint clinics to streamline pathways and aid patient decision-making

Cambridge University Hospitals NHS Foundation Trust

Motivation and aims

The 2018 urology GIRFT report highlighted that on average patients with MIBC wait an unacceptable 144 days from diagnosis to definitive treatment with radical cystectomy. The reasons for this are multifactorial, including delays to outpatient specialist review following initial MDT meeting, and the need for multispecialty review by both oncologists and urologists to allow consideration of optimum multimodality treatment.

To try and decrease delays in treatment, and thus improve overall survival for patients with MIBC, we set up a joint bladder oncology clinic (BOC) to ensure patients had simultaneous access to all members of the MDT contributing to bladder cancer patient care.

What was done

By reference to our prospective in-house cystectomy database, we identified that patients with MIBC were being reviewed by the bladder uro-oncology team within seven days of their initial MDT discussion. Patients were subsequently referred to the oncology team and this review generally occurred within seven days. We therefore created the combined joint BOC where patients could be seen by both teams simultaneously, with appropriate specialist nursing support. A shared decision-making model was utilised to provide patients with appropriate information, thereby allowing informed decisions to be made about their care. Future appointments were tailored to the nature of the consultation, with further decision-making appointments being made in the joint BOC.

On a practical front, setting up the joint clinic required identification of committed personnel and a suitable time and location for the clinic, with sufficient space for the patient, their relatives, and essential oncology and urology team members. Clinic templates were created to ensure that dedicated time slots were available for patients needing full MDT review, with the remaining slots being available for uni-disciplinary review, thereby allowing optimum usage of clinic time. Patients needing a dedicated joint BOC review were identified via the MDT process and highlighted to the clinic booking team to ensure correct clinic slot placement.

Successes/key points of good practice

Data presented in the first urology GIRFT report for our trust indicated the average time from MIBC diagnosis to cystectomy was 136 days. For the last complete year of data available from our in-house cystectomy database (pre-pandemic i.e. 2019) the average number of days had fallen to 94. Whilst this is likely to be due to a number of quality improvement projects realised during that timeframe, including MDT streamlining, we believe access to the joint BOC has contributed to this reduction.

The latest national cancer patient experience survey also indicated high levels of patient satisfaction with cancer care at our trust, with an overall score of 9.0/10.0 (National score 8.8/10.0). In particular, the shared decision-making domains for urological cancer scored highly, with 95% of patients indicating they had been involved in deciding about their care.

Lessons learned

- Clinician engagement and continued commitment is essential to the successful running of joint clinics
- Clear identification of patients needing a joint BOC appointment at the MDT meeting is crucial to ensure appropriate patient placement in the clinic. Continual education and support of the clinic booking teams is necessary to maintain this
- Successfully following a shared decision-making model requires consistent provision of written and media based patient information by both the oncology and urology teams
- Providing access to both the oncology and urology specialist nursing team within the clinic helps signpost patients on how to access more specific ongoing individual support
- The Joint BOC has helped us identify patients suitable for recruitment into clinical trials involving patients with MIBC
- Continuous monitoring of patient pathways including time from MDT to first clinic appointment and subsequent first treatment should be encouraged

5E Using data for quality improvement and quality assurance

Using bladder cancer quality performance indicators to drive improvements

Scottish Bladder Cancer QPI Programme and the Scot BC quality OPS clinical project

Motivation and aims

In 2009, the Scottish Government, by introducing the quality performance indicator (QPI) programme, committed the country to improving data collection to advance the quality and delivery of care for cancer patients, not least to address inequalities and variation. Aiming to nurture a culture of continuous quality improvement, by standardisation, regular review of real-time healthcare data, feedback, and implementation of change within a robust governance framework, the programme allowed for monitoring effectiveness and efficiency, along with aspects of safety; all of which are essential QI programme elements.

What was done

1. QPI programme for bladder cancer. Critical to ensuring wide acceptance and national implementation was the inclusion of all stakeholders. The process for development and implementation of bladder cancer QPIs commenced in 2012 with a multi-disciplinary panel of specialists and patient representatives evaluating available guidelines and evidence to develop 12 QPIs and measurability criteria. Standards for TURBT, pathology reporting, and surgery or bladder preservation in MIBC were enforced nationally in April 2014. Individual health boards are accountable for annual QPI reporting, review, feedback, and audit-driven service change, permitting evaluation and comparison of compliance to quality standards. Collated data on compliance have been published online annually by each of the three cancer networks in Scotland since 2015.

2. The Scot BC quality performance indicators, influencing outcomes, prognosis and surveillance (OPS) project. Whilst health boards collect data on compliance to QPIs, vital endpoints like recurrence, progression, longitudinal interventions, and outcomes are not included. Therefore, building on the programme, in Edinburgh the Scot BC quality OPS was developed as a clinical collaborative project to evaluate commensurate real-world clinical outcomes. These have informed, amongst others, modifications to clinical practice (including surveillance), and the development of prognostic tools, while creating avenues for research and national/international collaboration.

Successes/key points of good practice

Analysis of data from consecutive patients with a new diagnosis of bladder cancer diagnosed between 2014-2017 (n=4246) revealed the following:

- The use of a bladder diagram to document tumour and TURBT features increased significantly over the three years
- Detrusor muscle was consistently sampled in approximately 80% of primary TURBTs
- A single instillation of mitomycin C was used in 70% of patients with NMIBC
- The Royal College of Pathologists' check-list was used for reporting over 85% of TURBT and cystectomy specimens
- The sampling of 10 or more lymph nodes during radical cystectomy increased from 67.3% to 85.6% over the three years
- Radical treatment was undertaken within 90 days of diagnosis of MIBC in approximately 80% of patients
- Over the three years, the 30-day and 90-day mortalities following radical cystectomy were 0.9% and 1.9%, respectively
- The overall recurrence rate at the first check cystoscopy in patients with low grade NMIBC was 13%, and a single dose of mitomycin C was shown to significantly reduced the risk of recurrence in these patients
- In those with high grade cancer, under-staging at initial TURBT was <3%. Residual cancer at re-TURBT was observed to be significantly higher in centres not achieving the target set for detrusor muscle sampling

Lessons learned

- Clinician engagement is vital to ensuring compliance with benchmarking. The data gathered has allowed for modifications to the standards of care (for example, adopting a more nuanced approach to re-TURBT)
- Whilst such an extensive quality improvement programme is not yet in place outside Scotland, the establishment of such a culture, with continuous monitoring of practice to drive improvement, can and should be enabled within individual departments

5F Improving care through workforce development

Advanced nursing roles (diagnostics and treatment) to strengthen team capability and ensure continuity

GSTT / Barts Health

Motivation and aims

Advanced nursing roles benefit both the patient and the care provider. Nurse-led clinics involving assessment, diagnosis, and treatment, can improve patient experience and facilitate continuity of care.

TULA is a commonly performed procedure that is a key component in the ambulatory treatment of bladder cancer, resulting in reduced time to treatment and decreased hospital admissions.

In two teaching hospitals in London, we wanted to increase the provision of such services by using the nursing resource within our department.

What was done

As most NMIBC patients require long-term surveillance and interventions, and with junior doctors regularly rotating, we could see a need for a nurse-led flexible cystoscopy service with access to TULA in our clinic. We already had a well-established nurse-led flexible cystoscopy service, and, therefore, it seemed logical to train nurses to perform TULA in accordance with BAUN guidance (endorsed by BAUS).

This training was undertaken over a period of six months following application to the local clinical governance committee to gain consent from all within the directorate.

To establish this pathway, patients with known small recurrences and/or significant co-morbidities were offered management on the nurse-led TULA/ biopsy pathway. Similarly, such patients who had recurrences discovered on surveillance endoscopy were offered the treatment in the same sitting. At any point, if the patient was not deemed suitable, then the ability to arrange for a general/ spinal anaesthetic resection/ablation was possible.

An essential element to this process was to ensure that we were providing effective continuity of care.

Successes/key points of good practice

Following a review of a year's worth of consecutive nurse-led cystoscopies/TULA/biopsy (n=1500) we established that we had reduced admissions by 16% by performing procedures in the outpatient setting.

We feel that adding this skill-set to the nurses' role has increased the ability to provide continuity of care and strengthen our relationship with our patients, since we are now able to give histological diagnoses, deliver intra-vesical therapies, perform check cystoscopies, biopsy, diathermy and TULA. We have been able to share our experiences with other nurses to expand this provision across the country.

Lessons learned

- Clinician support is required from the outset
- Trained staff are required to support during TULA
- The ability to convert to an inpatient stay is necessary, but so far this has not been required
- Sufficient clerical support is required
- Audit is essential to ensure we are continuing to provide a robust service whilst recording adverse outcomes
- Finally, patients thrive on the continuity of care that results from seeing their nurse specialist for these procedures. This reduces anxiety and improves the patient experience – which is what we are here to deliver!

TURBT Training Lists

Addenbrookes Hospital, Cambridge University Hospitals NHS Trust

Motivation and aims

TURBT is a corner stone of bladder cancer management, performing two primary roles - staging and treatment. Quality performance indicators are discussed elsewhere in in this document but training for TURBT should aim to achieve compliance with these.

We wanted trainees to achieve the highest level of quality in TURBT, to improve their confidence in the technique by demonstrating that they could attain and maintain these standards, whilst ensuring the highest quality of care for our patients.

What was done

A training programme was developed to allow TURBT to be performed in a step-wise fashion, maintain patient throughput whilst meeting standards established through QPIs with an emphasis on obtaining detrusor muscle and complete resection. The TURBT model used was a modification of that of the European Association of Urology (EAU),as outlined in their NIMBC guidance.

The entire case is observed by the training consultant, with a conversation regarding the planning of the resection prior to the trainee beginning to cut. A pause for assessment of depth once the resection is started with appropriate revision is made. A further pause takes place at the completion of the resection of a lesion to assess if more cutting is required. Consideration is given to the use of base of tumour biopsies, with discussion of which tissue is to be selected for sampling (omitted in clearly muscle invasive cases or thin wall at base of resection). Additional cold-cup biopsies of suspicious areas, and prostatic urethra/bladder neck for assessment for reconstruction and/or urethrectomy, are taken as required. MMC is given as appropriate. Documentation is completed on a digital pro-forma.

Lastly, trainees are made aware that the pathology specimens from their resections will be audited, and, for those cases where muscle is not obtained, feedback and a case discussion will take place to encourage reflection and learning.

Successes/ key points of good practice

Outcomes for 10 consecutive months (n=80) were considered comparing cases performed by the training consultant with those carried out by trainees operating under the surgeon's direct supervision.

Comparing detrusor muscle rates in the primary resection specimen, these were similar between the consultant and trainee (92% vs 85%, combined rate 88.7%). Detrusor rates for both consultant and trainees increased with the addition of base of resection biopsies (97% vs 95%, combined rate 96.2%). A single incomplete resection was present in the series (1.25%) with this case being performed by the consultant. 30-day re-admission rates were also similar between the consultant and trainees (2.5% vs 4.8%, combined rate 3.75%).

Focused TURBT training with prospective audit of results helps trainees achieve a high quality standard, comparable to that of a specialist consultant, and has demonstrated that they can maintain these standards.

Lessons learned

- Deep base biopsies improve trainee rates of detrusor muscle capture
- Continuous audit improves outcomes and allows real-time reflection and change of practice
- Individual assessment of each component of TURBT in real time improves outcomes
- Junior trainees will require time to develop competency in each step and cases will be 'shared' until this is obtained
- Consultants will still have to perform resections to maintain patient throughput unless training lists have more time allocated to them

5G How to introduce new ways of working and new technologies

Laser ablation of bladder tumours in an outpatient setting

Ashford and St Peter's Hospital and NHS Foundation Trust

Charing Cross Hospital, Imperial College Healthcare NHS Trust

Motivation and aims

Our trusts are offering innovative bladder cancer treatment in an outpatient setting. This service, first established in 2014, allows patients with bladder cancer to be treated more cost efficiently and improves the patient experience by avoiding the need for a general anaesthetic and overnight stay.

What was done

A business case and new technology case was submitted at the trusts. Laser treatment of NMIBC is undertaken in the outpatient setting (laser safe flexible cystoscopy suite using a portable dual-diode laser), performed by two trained urology consultants. This allows patients to be treated without needing to be admitted to hospital, either as an inpatient or day case, and avoids the use of general anaesthetic. A patient video has been developed to help prepare patients for the procedure. The following groups can be managed:

1. Initial biopsy of red patches
2. Low-risk NMIBC
3. High-risk NMIBC disease in the elderly/high anaesthetic risk groups
4. Post BCG surveillance

Successes/ key points of good practice

There are significant cost savings in outpatient laser treatment versus inpatient or day case bladder tumour surgery through released theatre space and time, increased productivity, and shorter waiting times. Ashford and St Peters NHS FT and Imperial College Healthcare Trust were finalists in the best health tech solution for patient safety award at the HSJ patient safety awards 2019, for outpatient TULA. To date over a thousand procedures have been performed in 400 patients.

Lessons learned

- TULA is safe with high levels of patient satisfaction
- TULA offers increased efficiencies and releases theatre capacity
- It is cost effective with financial savings for trusts and commissioners
- Patient morbidity may be reduced with less need for general anaesthesia and the ability to continue anti-platelet drugs/ anti-coagulants
- TULA can be used in the palliative setting

6. Additional information

For each of the seven areas for quality improvement described in section 4 above, a number of resources have been collated. References or links are provided, along with an overview of the content.

Overarching guidance on bladder cancer:

Recommended document	Author	Overview
Guidelines on muscle-invasive and metastatic bladder cancer	EAU	EAU guideline on MIBC
Guidelines on non-muscle invasive bladder cancer	EAU	EAU on NMIBC
Bladder cancer: diagnosis and management	NICE	NICE guidance on bladder cancer

6A Patient-centred care and shared decision-making

Recommended document	Author	Overview
National cancer patient experience survey	Picker Europe	Annual survey on patient experience for a range of cancers, including bladder cancer
Fight Bladder Cancer website	Fight Bladder Cancer patient organisation	A range of information and resources for patients with bladder cancer
Action Bladder Cancer website	Action Bladder Cancer patient organisation	A range of information and resources for patients with bladder cancer, and those researching and treating it

6B Reliable triage to allow fast-track care for high-risk NMIBC and MIBC patients

Recommended document	Author	Overview
National cancer waiting times monitoring dataset guidance	NHS England	A set of rules to ensure that data are recorded in a way which allows cancer waiting times to be transparently reported
RESECT study	BURST	A global multi-centre observational audit with randomised feedback to sites

6C Optimising the use of outpatient and day surgery pathways

Recommended document	Author	Overview
BAUS essential in-house audit frameworks	BAUS	A retrospective audit tool on quality of first TURBT for NMIBC
Model Hospital	NHS Model Health System	Model hospital log in page, for further data points on performance in relation to bladder cancer
GIRFT urology surgery report	GIRFT	National report on urological care
British Association of Day Surgery website	BADS	Information and resources on day and short stay surgery for healthcare professionals
Same-day discharge bladder cancer pathway and top-tips	NHS England London Region	A pathway and top-tips for delivering a same-day discharge bladder cancer service, developed by the London Region in line with this guide.

6D Good practice in multi-disciplinary working

Recommended document	Author	Overview
Streamlining Multi-Disciplinary Team Meetings - Guidance for Cancer Alliances	NHS England	Sets out how MDT working should evolve to ensure that cases that need detailed discussion are afforded the necessary time, while those that are covered by clear protocols are managed appropriately. Essential reading for all MDT members.
Specialised kidney, bladder and prostate cancer service specification	NHS England	Specialised service specification including specialised bladder cancer services

6E Using data for quality improvement and quality assurance

Recommended document	Author	Overview
Bladder cancer quality performance indicators	NHS National Services Scotland	Review of Scottish bladder cancer performance quality indicators between 2014 and 2017

6F Improving care through workforce development

Recommended document	Author	Overview
Flexible cystoscopy training and assessment guide	BAUS and BAUN	Guidance on training in the use of flexible cystoscopy for nurses and other health care professionals

6G How to introduce new ways of working and new technologies

Recommended document	Author	Overview
Interventional procedure overview of transurethral laser ablation for recurrent non-muscle-invasive bladder cancer	NICE	Interventional procedure overview for TULA

7. Delivery checklist

Pathway component	Key actions
7A Patient-centred care and shared decision-making	• Review the quality of patient information • Consider how to use patient decision-aids • Review staff training for non-face-to-face consultation skills • Seek patient feedback about their experience of care
7B Reliable triage to allow fast-track care for MIBC and high-risk NMIBC patients	• At the point of diagnosis (e.g. flexible cystoscopy), ensure that every patient with suspected high-risk bladder cancer is put on an intensive fast-track pathway, with close monitoring of progress • Ensure that low-risk cases continue to meet cancer waiting timelines • Ensure that high-risk patients undergo their TURBT to a defined cancer network standard, and where possible performed by a sub-specialist clinician • Ensure that where possible clinic consultations take place with a sub-specialist clinician to allow full and detailed counselling
7C Optimising the use of outpatient and day surgery pathways	• Ensure that the default option for TURBT operations is day surgery • Review the TURBT pathway to ensure there are no obstructions to day case surgery (e.g. intravesical chemotherapy given in theatre, nurse-led discharge etc) • Consider developing enhanced outpatient facilities for flexible cystoscopy-based treatment, including laser and diathermy use
7D Good practice in multi-disciplinary working	• Review, and fully adopt, the recommendations of the NICE 'Streamlining MDT Meetings' guidance • Avoid the need for double reporting of imaging and pathology specimens by ensuring that the first report meets with MDT protocols and standards • Audit MDT functioning against the Cancer Alliance Network standards
7E Using data for quality improvement and quality assurance	• Develop a set of key metrics that will be prospectively collected and audited by the bladder cancer service team • Ensure that these key metrics include those on model hospital, and review the model hospital data at regular intervals • Participate fully in BAUS audits that relate to bladder cancer care
7F Improving care through workforce development	• Review the roles and skills of the specialist nursing and allied professionals • Develop a departmental staff development plan that includes details of how theoretical and practical training will be delivered • Review the place of newer technologies within bladder cancer management pathways and develop a plan for introducing new techniques, as appropriate • Consider how simulator training can be accessed and used for staff development
7G How to introduce new ways of working and new technologies	• Be open to evaluating advancements in technology and data-processing to enhance bladder cancer care

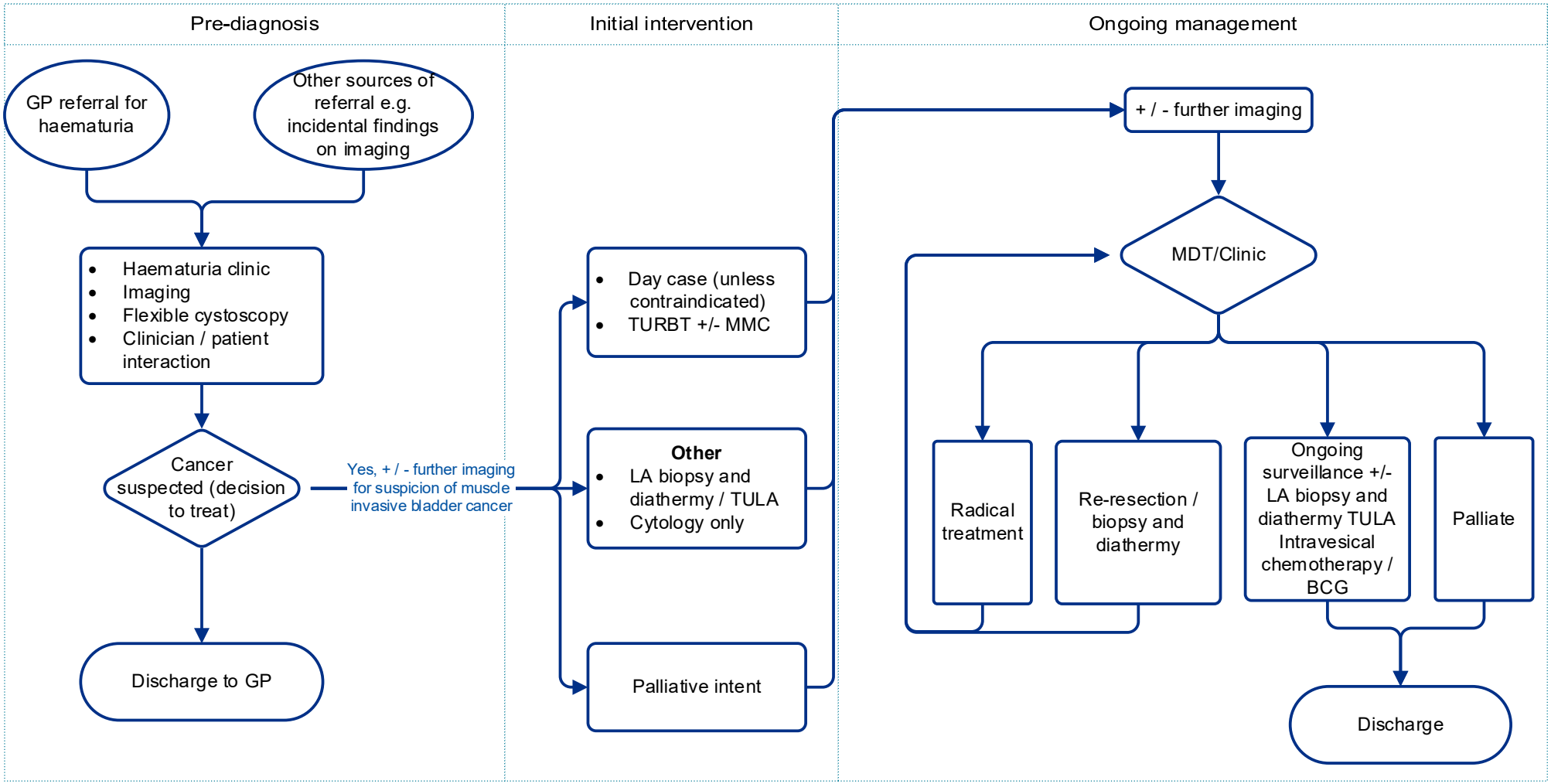
7. Areas for further research

For those wishing to carry out additional research, the following priorities could help drive further improvements to bladder cancer care:

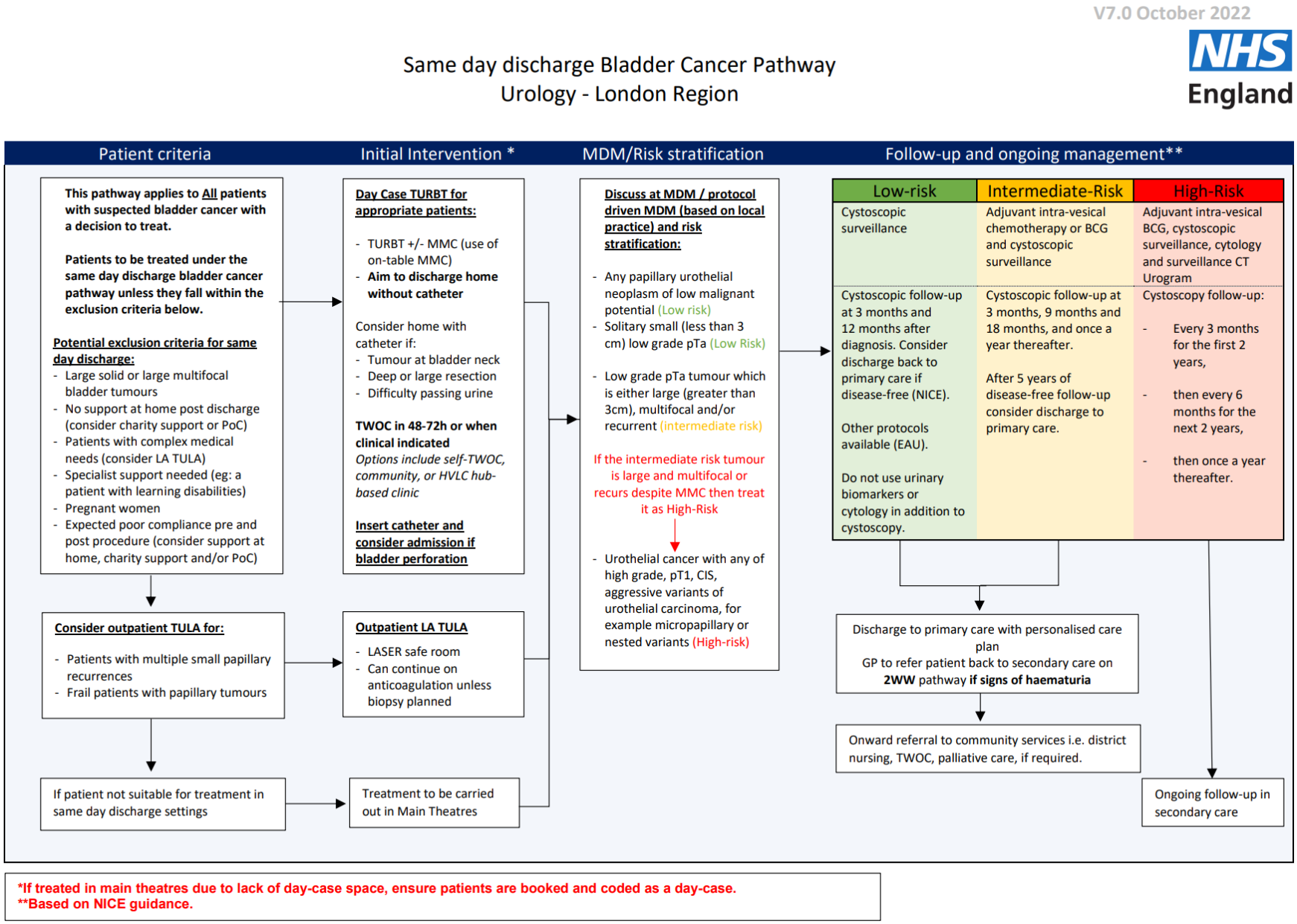
1. Patient experience: understanding why satisfaction for bladder cancer patients is lower than for other tumour groups and seeking ways of correcting this.
2. Alternatives to BCG for treatment of high-risk NMIBC.
3. Alternatives (and adjuncts) to flexible cystoscopy for diagnosis and surveillance, for example the effective introduction of biomarkers.
4. Rationalising of follow-up schedules, for both NMIBC and treated MIBC.
5. Working across area networks: description of best practice in effective collaboration between units to illustrate seamless provision of care.

Appendix

Full page pathway



Example same-day discharge pathway from London region



*If treated in main theatres due to lack of day-case space, ensure patients are booked and coded as a day-case.
**Based on NICE guidance.

Available for download on FutureNHS.

Glossary

Organisations/groups

BADS	British Association of Day Surgery
BAUN	British Association of Urological Nurses
BAUS	British Association of Urological Surgeons
BURST	British Urology Researchers in Surgical Training
CPOC	Centre for Perioperative Care
EAU	European Association for Urology
GIRFT	Getting It Right First Time programme

Acronyms

2WW	two week wait
AI	artificial intelligence
ANP	advanced nurse practitioner
BOC	bladder oncology clinic
CNS	clinical nurse specialist
CTU	computer tomography urogram
CWT	cancer wait times
GA	general anaesthetic
IRMER	ionising radiation medical exposure regulations
LA biopsy	local anaesthetic biopsy
MDT	multi-disciplinary team
MDTM	multi-disciplinary team meeting
MIBC	muscle invasive bladder cancer
MMC	mitomycin C
NBI	narrow band imaging
NMIBC	non-muscle invasive bladder cancer
PDD	photodynamic diagnosis
SCP	surgical care practitioner
TULA	outpatient transurethral laser ablation
TURBT	transurethral resection of bladder tumour
US	ultrasound
WSI	whole slide image

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