Estimation of Bladder Volume Using Portable Ultrasound Bladder Scanners (PBUS) Implementation Guide
# IMPLEMENTATION GUIDE

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## Appendices

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## Glossary
EXECUTIVE SUMMARY

This Implementation Guide has been commissioned by the Department of Health (DH) to help trusts increase their use of Portable Bladder Ultrasound Scanners (PBUS) and realise the benefits they can bring when introduced as part of a wider package of care. The Guide includes information about those benefits, the local opportunities available, the drivers for adoption, as well as indicative costs and potential savings.

PBUS allow for the non-invasive measurement of bladder volume; currently the primary alternative method of measuring bladder volume is the insertion of an in-and-out urinary catheter. The use of a non-invasive alternative therefore provides the following benefits:

- Fewer invasive catheterisations
- Increased patient comfort and satisfaction
- Maintains privacy and dignity for the patient
- A faster and easier procedure than catheterisation
- Easy to use with children
- Reduction in overall equipment costs associated with catheterisation

PBUS are in routine use in the NHS, both within primary care and acute settings. Their availability however varies between organisations and across specialities. As is common with the introduction of many medical technologies, the capital purchase is just one step towards successful implementation. One of the key expected benefits of this technology is a reduction in urinary tract infections. This benefit will not be realised without a full understanding of the care pathway, where use of the technology sits within this, and the introduction of parallel strategies to reduce urinary catheter usage.

This Implementation Guide provides practical advice on how to introduce PBUS, including:

- How to establish a project
- How to measure success and improvements in outcomes
- How to deliver robust staff training

Also included is a suite of tools such as competency assessments, a communications plan and sample job descriptions. These have been developed in conjunction with NHS sites and have been designed to assist organisations with introduction of the technology and other urinary catheter reduction strategies.

Many NHS organisations have offered the NHS Technology Adoption Centre (NTAC) advice during the production of this Guide, for which we offer our thanks.

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INTRODUCTION

National data reports that 20% of male and 15% of female patients in hospital are currently catheterised and these rates have been fairly consistent from April 2011 onwards. Urinary Tract Infections (UTIs) are a common complication of urinary catheters. Plowman acknowledges that prevalence studies generally find UTIs to be the most common nosocomial infection, accounting for between 21% and 45% of all Hospital Acquired Infections (HAIs) and Emmerson found similar rates of 23.2% for UTIs. The proportion of patients in hospital, both male and female, with a catheter and a UTI has shown stability from September 2010 to March 2012 although national rates have remained around 1.7%.

NTAC has collated a body of evidence through working closely with Barts Health NHS Trust which suggests that this technology, when used in conjunction with other strategies and tools, can offer a reduction in the number of patients who are catheterised. This reduction may potentially reduce many of the implications associated with catheterisation, such as infection. Evidence suggests that using PBUS along with adopting standard protocols, including staff training and identifying appropriate patients, is associated with reduced risk of unnecessary catheterisation, reduced UTIs and fewer adverse events, as well as improved patient satisfaction when compared with catheterisation. Barts Health NHS Trust has kindly given permission for NTAC to use some of the materials they have developed and agreed to share their approach to reducing UTIs.

Patients who may potentially benefit from PBUS include patients who have a suspicion of urinary retention, including those with a previous history of stroke, and patients who require a ‘trial without catheter’. Rigby agrees that bladder ultrasound is now considered to be a safer alternative to catheterisation in the diagnosis of urinary retention.

The National Institute for Health and Clinical Excellence (NICE) recommends the measurement of post-void residual volume using a bladder scan in preference to catheterisation in several of its guidelines. These guidelines refer specifically to women suffering symptoms of voiding dysfunction or recurrent UTI, children who have symptoms of UTI but are unable to provide a urine sample and patients who are experiencing neurogenic lower urinary tract dysfunction problems relating to neurological disease.

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2 NHS Safety Thermometer: UTI and Catheter data (national)
3 Rigby, D; Housami, FA (2009) Using bladder ultrasound to detect urinary retention in patients
4 Plowman, R; Graves, N; Esquivelt, J; Roberts, JA (2001) An economic model to assess the cost and benefits of the routine use of silver alloy coated urinary catheters to reduce the risk of urinary tract infections in catheterized patients.
From discussions with various NHS organisations, NTAC has found that current use of PBUS appears to be varied both within acute and community settings. Problems in obtaining both baseline and evaluation data has made it difficult to attribute cost savings to use of this technology, which has led to reluctance to invest in some areas.

In the production of this Implementation Guide, NTAC have been in contact with clinicians and managers at the following NHS Trusts throughout England: Sheffield Teaching Hospitals NHS Foundation Trust, East and North Hertfordshire NHS Trust, Salford Royal NHS Foundation Trust, Guys and St Thomas’ NHS Foundation Trust and Dorset Healthcare University NHS Foundation Trust.

Information was gained through verbal communication and through electronic surveys completed by each of the trusts. The overall messages that NTAC received are:

- PBUS are now used routinely within secondary care following an ad-hoc rollout over an extended period of time
- PBUS are used less routinely within primary care
- Bladder scanning is embedded into current clinical practice within secondary care
- Bladder scanning is done on an ad-hoc basis within community setting, dependent on equipment availability
- Nurses and Health Care Assistants predominantly use PBUS
- Within secondary care, there are numerous different PBUS devices, some standardisation would be of benefit to staff and the NHS organisation

It is hoped that, by referring to this Guide throughout the implementation process and by using the tools it contains, trusts will be enabled to successfully implement this technology in a planned and sustainable way.

These tools include advice on how to establish an Implementation Team and ideas for measuring success.

Also included within the appendices is information about a number of products currently on the market and a summary of the available evidence for PBUS.

**WHAT ARE PORTABLE BLADDER ULTRASOUND SCANNERS?**

PBUS are used to non-invasively estimate the volume of urine present in a patient’s bladder. There are a number of different PBUS available on the market. Although they vary in the precise algorithm used to determine bladder volume, they all follow the same basic principles.

The technology is based around the use of traditional 2D ultrasound which is frequently used in other clinical applications. An ultrasound machine works by transmitting high-frequency sound pulses into the body via a probe which is placed on the skin.
As the sound waves travel across the body through different tissue and bones, they are scattered and reflected in different directions. A proportion of these scattered sound waves travel back towards the probe which records them and passes the information back to the ultrasound machine. The ultrasound machine uses this information to construct a picture of a ‘slice’ through the body.

PBUS work by taking several of these ‘slices’ and combining them to construct a 3D model of a bladder. An algorithm is then used to calculate the volume of the bladder in the model. Different manufacturers use different ultrasound ‘slices’ and different algorithms to calculate an estimate of bladder volume.

Although most products have the same basic primary function; to assess the volume of urine present in the bladder, there are differences in the levels of functionality offered by different products. In purchasing PBUS devices, trusts will need to consider the degree of functionality most appropriate to their needs. The notable differences between products which NTAC are aware of, are in regards to:

**Aiming:** All devices require the operator to have a basic degree of anatomical knowledge in order to aim the probe onto the bladder. Some devices are also able to identify if the whole bladder has been included in the scan and, if not, can provide some direction to the user on how to reposition the probe.

**Real-time vs non-real time:** Some devices are able to display ‘live’ ultrasound images onscreen in order to assist with the positioning of the probe. However, this may make the device more complex to use.

**Identification of the bladder wall:** Many of the devices can automatically identify the bladder wall; however some require the operator to manually position markers on screen.

It is outside of the scope of this document to provide a comparison of the accuracy of different manufacturers’ products. All of the PBUS detailed in the Guide are used in routine clinical practice in NHS organisations.

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**CURRENT PRACTICES AND PATHWAYS**

Within a number of secondary care providers that NTAC has been in dialogue with, PBUS were reported to be routinely used as a first line intervention within all wards and departments where there is a suspicion of urinary retention. From observations and discussions with several clinicians, most staff are fully trained in the use of PBUS and the technology is well established within clinical practice.

Availability and usage of PBUS within primary care is reported by community clinicians to be variable and dependent on individual trust’s arrangements. Currently, within primary care, where there is no provision for Ultrasound Bladder Scanning; patients who have a suspicion of urinary retention or who need to undergo a ‘trial without catheter’ are offered ‘in-and-out catheterisation’ to establish if urine is present in their bladder. In some areas, district nursing staff may be able to borrow an Ultrasound Bladder Scanner from their local Continence Service or, alternatively, an Outpatients Department on an ad-hoc basis. Some patients may be referred by district nursing staff to their local Continence Service to receive Ultrasound Bladder Scanning.

**NICE Clinical Guideline 40 Urinary Incontinence: the management of urinary incontinence in women** states that the measurement of post-void residual volume by bladder scan or catheterisation should be performed in women with symptoms suggestive of voiding dysfunction or recurrent UTI. A bladder scan should be used in preference to catheterisation on the grounds of acceptability and lower incidence of adverse events.
**NICE Clinical Guideline 54 Urinary tract infection in children: diagnosis, treatment and long-term management of urinary tract infection in children** states that infants and children with symptoms and signs suggestive of urinary tract infection (UTI) should have a urine sample tested for infection. When it is not possible or practical to collect urine by non-invasive methods, catheter samples or suprapubic aspiration (SPA) should be used. Before SPA is attempted, ultrasound guidance should be used to demonstrate the presence of urine in the bladder.

**NICE Clinical Guideline 148 Urinary incontinence in neurological disease: management of lower urinary tract dysfunction in neurological disease** recommends that, during the assessment of neurogenic lower urinary tract dysfunction, the clinician measures the post-void residual urine volume by ultrasound, preferably using a portable scanner, and consider taking further measurements on different occasions to establish how bladder emptying varies at different times and in different circumstances.

The use of portable ultrasound to measure residual urine volume was considered preferable to the use of catheter-measured residual volume measurements in view of the reduced discomfort, absence of risk of infection and patient acceptability.

### THE AVAILABLE TECHNOLOGIES
A number of PBUS are available from several different manufacturers. The specific technique used for estimation varies between products, although the basic principles of combining multiple planes of 2D ultrasound remain the same.

Appendix 1 summarises the different products made known to NTAC during production of this Guide. It is recognised that this may not be a complete list of products available on the market. The appendix details the manufacturer or UK distributor, the technology employed, costs and training requirements.

It should be noted that the unit cost of products which have been included may reflect devices with varying levels of functionality and the true cost is dependent on the specification required by an organisation. Individual trusts should select the most appropriate equipment for their organisation based upon the evidence available, clinical opinion, cost and system considerations.

### WHY IMPLEMENT PORTABLE BLADDER ULTRASOUND SCANNERS?

#### THE BENEFITS OF USING PORTABLE BLADDER ULTRASOUND SCANNERS WITHIN PRIMARY CARE
Through discussions with clinicians at a variety of NHS Trusts, NTAC have been notified of the following benefits/opportunities:

**BENEFITS TO PATIENTS**
- Allows non-invasive measurement of urinary bladder volume
- Enables appropriate care to be given in patient’s home environment
- Reduces anxiety and promotes dignity for patients
- Reduced risk of infection compared with measurement via catheterisation
- Reduced risk of trauma associated with catheterisation

**OPPORTUNITIES FOR THE SERVICE / TRUST MANAGERS**
- Improved risk management and clinical governance
BENEFITS TO CLINICAL STAFF
- Minimal training is required by staff to enable them to use the technology safely
- Easy to use technology
- Using technology aids clinical decision making

THE BENEFITS OF USING PORTABLE BLADDER ULTRASOUND SCANNERS WITHIN SECONDARY CARE
In addition to the benefits listed for primary/community care, the following additional benefits have been reported by clinicians from a number of acute trusts:

OPPORTUNITIES FOR THE SERVICE/TRUST MANAGERS
- Opportunity to reduce bed days when implemented as part of a wider package of care
- Potential cost savings related to reduced number of catheterisations

EVIDENCE FOR ESTIMATION OF BLADDER VOLUME USING PORTABLE ULTRASOUND BLADDER SCANNERS
A comprehensive literature search and critical appraisal of the evidence base is outside the scope of this Guide. Included in this document, however, are references to some of the published materials and, in addition, further references are included in Appendix 2. We are also aware of a number of publications which bear relevance to the contents of this Guide. NTAC has not critically appraised this evidence and would strongly recommend that a suitably qualified clinician undertakes a review of the available literature before drawing any conclusion with regard to which is the most appropriate technology to either purchase or use in practice within their local setting. NTAC are aware of four papers which link the use of ultrasound bladder scanners with a reduction in UTIs, one of which is a meta-analysis.

LOCAL PICTURE – THE OPPORTUNITY
When looking at the local implementation of this technology within primary or secondary care, it is important to be able to capitalise on the potential patient, clinician and organisational benefits. The benefits noted above are only possible when adoption is properly planned, implemented and sustained.

Part of the process of planning implementation involves measuring local variables at the beginning of the process and then assessing the benefits post-implementation.

One of the difficulties NTAC encountered during production of this Guide is that, whilst this technology is in use in many NHS organisations, few have measured or have been able to measure its impact or contribution towards reductions in UTIs.

Whilst there is evidence\textsuperscript{11,12,13,14} that this technology can reduce catheterisations, none of the NHS sites that NTAC contacted were able to provide data to support this as they not evaluated the impact on catheterisations during implementation. The reason for this can be partly attributed to the multi-factoral approach that is needed to reduce UTIs e.g. introduction of care bundles, enhanced training.

Measurement is, never the less, very important and NTAC has been given an example audit tool, which trusts can use to set a baseline, to help them plan for future improvements and measure post-implementation benefits. This tool is available in Appendix 8 and can be used as a printable hard copy or as an Excel worksheet to be completed electronically. Further information how to use the tool can be found in the Measuring Success section.

**DRIVERS FOR ADOPTION**
The key policy drivers for adoption of PBUS are:

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<td>High Impact Actions for Nursing and Midwifery</td>
<td>Demonstrate a dramatic reduction in the rate of Urinary Tract Infections (UTIs) for patients in NHS provided care.</td>
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<td>National Commissioning for Quality and Innovation (CQUIN) Goals</td>
<td>The goal of the NHS Safety Thermometer CQUIN is to increase the measurement of harm from pressure ulcers, falls, urinary tract infections in patients with catheters and venous thromboembolism (VTE) by using this device.</td>
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<td>Quality, Innovation, Productivity and Prevention. QIPP: Department of Health</td>
<td>Right Care Workstream: to eliminate unwanted variations in clinical practice by ensuring optimal resource allocation by commissioners and shifting spend from low to high value interventions. Adding value and reducing cost is the basis of the NHS QIPP challenge (Innovation, Health &amp; Wealth, 2011)</td>
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**HOW TO IMPLEMENT PORTABLE BLADDER ULTRASOUND SCANNERS**

This section deals with the practicalities of implementation of PBUS either within primary or secondary care. In order to realise the patient and system benefits discussed above, it is very important to manage the implementation in a planned and sustainable manner. The following sections provide information on a number of areas which an Implementation Team will need to consider during implementation. This includes: setting up the Implementation Team; preparing the business case; measuring outcomes; procurement; managing risk and communications. NTAC have developed various tools to assist NHS trusts with this and they are considered here.

**NTAC – GENERIC ADOPTION PROCESS**
The Generic Adoption Process (GAP), developed by NTAC, is a stepped approach designed to support those responsible and involved in the technology adoption process. The tools and resources available have been written to equip clinicians, managers and other key stakeholders with everything they need to effectively adopt and implement new medical technologies within the NHS.
The GAP can be used at various stages of implementation and users are encouraged to either follow the process from beginning to end or to dip in and out of the steps that are most relevant to their stage in the process.

The GAP is a web based resource and available free for all NHS staff – the website address is www.ntac.nhs.uk/GAP

### NTAC – OPERATIONAL SERVICE REQUIREMENTS

In order to ensure that the benefits of technology implementation are realised, there are a number of operational service requirements that NHS organisations must meet. These include issues such as quality, implementation, financial demand and procurement requirements. These considerations will apply irrespective of whether PBUS are being introduced or up-scaled within primary or secondary care. NTAC recommends that these issues are managed by adopting a project management approach.

### PROJECT IMPLEMENTATION TEAMS

NTAC’s experience has shown that successful implementation of medical technologies is best supported using a systematic and team based approach. A first and crucial step should be the formation of a Local Implementation Team who work together to oversee and drive the required clinical and system changes. The workload of the Implementation Team will vary depending upon which stage of the implementation an organisation has reached. Initially work should centre on:

- Devising a project plan
- Building a business case
- Agreeing standards of care that demonstrate Quality, Innovation Productivity and Prevention (QIPP) benefits
- Selecting the appropriate technology for the organisation’s priorities and caseload
- Setting baseline metrics (parameters for evaluation); and
- Ensuring effective communication of the project to all involved

Recommended membership of an Implementation Team aiming to utilise bladder scanning/reduce catheter associated urinary tract infections (CAUTIs) is listed below. This will, of course, vary depending upon whether this technology is being deployed in a hospital or community setting and any specific group of patients (e.g. Stroke sufferers) it is to be used with.

When deciding on membership of the Implementation Team, thought should be given to all staff that have an input to the patients’ pathway of care. In the first instance, the Implementation Team should include staff with key roles and responsibilities:

### CLINICAL IMPLEMENTATION PROJECT LEAD (CLINICAL CHAMPION)

Within primary care, this may be a senior clinician from the Continence Service or a community specialist clinician with responsibility for clinical leadership, directing education and guideline and protocol development relating to urinary catheterisation and continence issues. Within secondary care, this is likely to be a Consultant Urologist, Specialist Nurse or Nurse Consultant with responsibility for clinical leadership, directing education and guideline and protocol development for urinary catheterisation.

The clinical lead is also responsible for liaison with clinical colleagues throughout the trust; this includes relationship building, troubleshooting, identifying and overcoming hurdles, and raising the profile of the project.
EXECUTIVE SPONSOR
This individual will be from the cluster for primary care and will be an executive or divisional director from the acute trust. This role is essential to the successful delivery of the project; the executive sponsor provides organisational drive. The sponsor will champion implementation and will influence both internal and external stakeholders to give formal backing to the programme. There will need to be senior buy-in from primary or secondary care as there will need to be changes to some current clinical pathways, along with securing appropriate resources.

PROJECT MANAGER
The Project Manager is responsible for the management of the project, including the development of project plans, terms of reference and schedules of work. They are responsible for ensuring a systematic approach to implementation is taken, including the development of a robust business case, informatics support and the provision of adequate resources for sustainable implementation. In the case of primary care, this may be someone from within a cluster or, alternatively, someone from a urology related speciality within secondary care would be suitable.

INFECTION CONTROL LEAD
Within secondary care, this role will usually be fulfilled by one of the trust’s infection control nurses. Primary care will have a similar staff role who is community based. The infection control lead will provide advice and support on infection control issues and support in the development of the trust definition of a CAUTI. They will be responsible for linking in with the cluster/ trust infection control group.

INFORMATICS LEAD
This will usually be an information analyst from either primary or secondary care with responsibility for providing practical support and advice on data collection for the project. The informatics lead will assist with the introduction of CAUTI clinical incidence code where an electronic incident reporting system is in use and support with the development of metrics for the project and the production of reports and analyses of the outcomes.

CHAIR
The Chair is ultimately responsible for the implementation process. The Chair has to ensure that implementation of the technology provides value for money and must balance the needs of the project’s various stakeholders. The Chair will act as the Champion for Change, ensuring that the trust ‘owns’ the project and bringing together the relevant members of the extended team to ensure a successful implementation. Whilst, in theory, the Chair can be any member of the team, in NTAC’s experience this role is often fulfilled by the clinical lead.

The Chair is responsible for the overall direction of the implementation process, ensuring that it remains on target to deliver its objectives, and will achieve the expected clinical and service benefits. If the project warrants it, the Chair may delegate some responsibility to the project manager or other members of the project team.

Specific responsibilities of the chair include:
- Ensuring that there is a coherent structure and logical plan in place to move forward
- Ensuring regular reviews take place where necessary and that recommendations are addressed
- Authorising and approving post-implementation review
- Briefing senior management where appropriate about progress
- Chairing implementation team meetings
- Escalating serious problems upwards to senior management
- Taking responsibility for overall progress and initiating corrective action where necessary.
Early questions that the Implementation Team must consider include:

- Is there a clear understanding of the available technologies and their potential impact on patients and the system?
- What changes need to be implemented CCG/Cluster/trust-wide to ensure successful implementation of this technology?
- What is the mechanism for measuring and reporting outcomes?
- Who is responsible for capturing the required data and reporting back to the Implementation Team?
- Are there any obvious hurdles that will need to be overcome and how can this be achieved?
- Have all the necessary stakeholders been identified and engaged?

As time progresses, the Implementation Team will need to focus upon driving delivery, overcoming any ongoing operational hurdles, monitoring progress, checking that the anticipated benefits are being realised, identifying corrective change if needed and ensuring that the project is running to the agreed timeframe. Towards the end of the project, the Implementation Team will need to focus upon evaluation of the project and on the sustained and continued use of the technology beyond its end.

The workload of the Implementation Team will vary depending upon which stage of the implementation an organisation has reached. Initially the focus of the work should centre on:

- Identifying a project team (identify Chair, and other members as described above)
- Arranging regular meetings, on at least a monthly basis, where the project team would look at the project findings and make decisions on any changes/future recommendations
- The project team should aim to engage the support of senior clinicians/heads of nursing/matrons and other staff involved in the care of these patients e.g. link practitioners
- Exploring issues around the responsibility of nursing teams in reducing urinary catheter infections
- Developing an initiative to improve an aspect of practice which will reduce Healthcare Associated Infections (HCAI), e.g. trial the short term urinary catheter bundle in a hospital setting
- Engaging with stakeholders so that staff on the wards, or alternatively within the community setting, receive training on the use of the bundle, catheter insertion technique and after care; based on best practice.

In a hospital setting early questions that the Implementation Team must consider include:

- The current catheterisation rate (this becomes the baseline)
- The scale of the problem (e.g. current CAUTI rates, the number of patients affected, impact upon length of stay, additional drug costs etc.)
- Current practice – what is the existing care pathway?
- How are staff currently trained in catheterisation and prevention of UTIs?
- What are the future training requirements likely to be?
- What is the timescale for implementation of the project?
- The choice of product, features and technical support from the distributor and/or manufacturer
- What are the capital and ongoing maintenance costs?
- How are patient groups are to be involved?
- Which clinical areas would frequently see urinary retention or over distension amongst its patients?
- Which areas would, therefore, benefit from regular use of Ultrasound Bladder Scanners and do they currently have access to them?
Depending upon where the organisation identifies the greatest impact or benefit might be found, the Implementation Team may also wish to consider involving stakeholders from some of the following areas:

- Care of the Elderly
- Neurology
- Trauma and Orthopaedics
- Stroke and Rehabilitation
- General Medicine
- Gynaecology and Gynaecology Outpatients
- Surgical Recovery
- General Surgery
- Day Surgery
- Accident & Emergency
- Cardiothoracic Surgery
- Urology and Urology Outpatients
- Paediatrics

Many of these points will need to be considered when implementing this technology within the primary care setting. Stakeholders may be from the continence service and/or the urology services from the acute sector, community matron service and district nursing services within the community.

**BUSINESS CASE**

In order to demonstrate the viability of a project, a business case will need to be written. The business case will detail all the costs of the project and explain exactly how these will be met, for example through direct funding or via subsequent savings made available. The implementation of any new technology into the NHS will result in changes to the costs of both the trusts and the trust’s commissioning partners. The example from Barts Health NHS Trust, cited in this Guide, suggest that when PBUS are implemented into the secondary care environment, along with other strategies and tools, there are significant savings to be made. Communication with a Clinical Nurse Specialist from Dorset Healthcare University NHS Foundation Trust would suggest that similar potential savings may be possible for primary care. However, irrespective of whether PBUS are being considered in primary or secondary care, there are also upfront costs such as the capital costs of the new equipment that need to be funded before any savings are made.

Individual NHS organisations will have their own arrangements for the reviewing and approval of business cases. Some trusts will have their own format/template which must be followed; however, in all cases the content is likely to be similar.

The Implementation Team should treat the production of a business case as an early priority in the life of the project. The Implementation Team should also revisit and review the business case regularly throughout the project to ensure that the project is delivering its required outcomes. If the project is not meeting the forecasted projections, changes should be made to the business plan and the viability of the project re-assessed by the Implementation Team.

**MEASURING SUCCESS**

In order to demonstrate benefits of the implementation project, it is important to take measurements before and after implementation. This will enable real-life benefits to be measured and built upon.

It is the remit of the Local Implementation Team to decide upon which metrics are the most relevant for their circumstances. However the metrics chosen should be linked to the benefits identified within the business case.
NTAC have been shown two key tools which appear to offer clear ways in which to monitor catheterisations rates and CAUTIs. These are: the use of a local audit tool and submission and review of data into the NHS Safety Thermometer.

**NHS SAFETY THERMOMETER**

In the production of this guide, NTAC were notified by the NHS South East Coast Quality Observatory of the NHS Safety Thermometer improvement tool. The NHS Safety Thermometer is a data collection and monitoring tool for preventing harm in healthcare and used by hospital teams for improvement work. The data collected by the NHS Safety Thermometer can be at a ward, hospital or national level.

For 2012/13 a goal has been added to the Commissioning for Quality and Innovation (CQUIN) Scheme relating to use of the NHS Safety Thermometer. The NHS Safety Thermometer CQUIN will be worth between 0.125% and 0.5% of the actual contract value. In order to fulfil the requirements of the CQUIN, providers have to participate in a monthly one day survey focussed on four outcomes (pressure ulcers, falls, urinary tract infections (in patients with catheters) and new venous thromboembolism (VTE)).

In order to submit data into the NHS Safety Thermometer, trusts will need to nominate a ‘CQUIN Safety Thermometer Coordinator’ and register their details with the Health and Social Care Information Centre. This can be done by emailing enquiries@ic.nhs.uk with their name, role, organisation name, organisation code (if known) and contact details. Emails need to be sent from the same address that will be used to submit the data.

The South East Coast Quality Observatory publishes a number of analyses which make use of Safety Thermometer data including:

**NHS SAFETY THERMOMETER PARETO ANALYSIS OF BURDEN OF HARM**

This is an organisational level report that allows assessment of the main drivers of harm in an organisation, and a breakdown of the mix of harms that affect patients with multiple harms.

**NHS SAFETY THERMOMETER QUARTERLY FUNNEL PLOTS**

This is an organisational level report, split by organisation type (acute, community etc.), which can be used to indicate statistical outliers for a range of measures from the NHS Safety Thermometer.


**PROCUREMENT**

The table at Appendix 1 summarises many of the different products made known to NTAC during production of this Guide.

Local trust procurement rules will apply and Implementation Teams should seek advice from their local procurement departments regarding potential purchases of equipment. If products are bought directly from the NHS Supply Chain, there is no need for a formal tendering process to take place and this can be very helpful when trying to adhere to a tight timeframe.

If Implementation Teams wish to purchase equipment direct from a manufacturer, a technology specification document may need to be drawn up as part of the tendering process or business case. NTAC have obtained an example technology specification document from NHS Supply Chain which is included in Appendix 3.
In addition to the costs listed in Appendix 1, different manufacturers will often offer different procurement options. For example, if a trust were to buy a specified number of units, the manufacturer may provide a maintenance contract at a reduced rate. Other lease hire options/managed service contracts may also be available from manufacturers and distributors. For further information, please contact the relevant company.

**RISK MANAGEMENT**
All projects contain an element of risk. It is the task of all members of the Implementation Team to keep these risks at manageable levels. The following table identifies specific risk areas and looks at the control measures available to mitigate those risks:

Key factors critical to success, i.e. risks areas and suggested control measures:

<table>
<thead>
<tr>
<th>Risk area</th>
<th>Control measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership</td>
<td>• Nominate Clinical, Executive and Management champions</td>
</tr>
<tr>
<td></td>
<td>• Clearly communicate chosen impact on system e.g. reduction in catheterisation rates</td>
</tr>
<tr>
<td>Engagement</td>
<td>• Identify and include all key stakeholders (including clinicians) in planning and implementation</td>
</tr>
<tr>
<td>Culture of Organisation</td>
<td>• Instil belief in the benefits to patients</td>
</tr>
<tr>
<td></td>
<td>• Foster commitment</td>
</tr>
<tr>
<td></td>
<td>• Communicate effectively</td>
</tr>
<tr>
<td></td>
<td>• Ensure sustainability of change</td>
</tr>
<tr>
<td></td>
<td>• Meet regularly with key staff</td>
</tr>
<tr>
<td>Finance</td>
<td>• Prepare a robust business case</td>
</tr>
<tr>
<td>Capability &amp; Education</td>
<td>• Ensure understanding of what is being implemented and why</td>
</tr>
<tr>
<td></td>
<td>• Plan thoroughly</td>
</tr>
<tr>
<td></td>
<td>• Actively train and educate all stakeholders - use supplier</td>
</tr>
<tr>
<td>Information</td>
<td>• Plan for good data quality</td>
</tr>
<tr>
<td></td>
<td>• Ensure clear outcome measures are identified and accessible</td>
</tr>
<tr>
<td></td>
<td>• Establish baseline</td>
</tr>
<tr>
<td></td>
<td>• Benchmark and Audit</td>
</tr>
<tr>
<td>Process</td>
<td>• Ensure adequate time to plan</td>
</tr>
</tbody>
</table>

**COMMUNICATIONS**
In order to achieve successful widespread adoption, it is essential that all relevant stakeholders are communicated with. Lack of communication is a barrier to adoption because, unless each stakeholder has the opportunity to understand the reasons for the technology implementation, they cannot be expected to support it. A comprehensive communications strategy will help achieve this goal.

NTAC have provided a document outlining an approach to communication that trusts may wish to use. The document is included in Appendix 4. This document recommends that target audiences are identified and relevant and appropriate messaging and communications are constructed for each of them.
Through positive communication, each stakeholder will be able to understand the effect the proposed implementation will have on them. With widespread buy-in, the implementation and adoption process will be much smoother.

NTAC was able to gain valuable information through verbal communication and completion of electronic surveys by each of the trusts. The key messages that NTAC received are detailed in the Introduction section of this Guide, and this further reinforces the importance of communication.

WHIPPS CROSS HOSPITAL (BARTS HEALTH NHS TRUST)

A number of clinicians and other specialists have been clear that the implementation of PBUS will not, in isolation, deliver the expected benefits of a reduction in catheterisation rates and ultimately UTIs. Scanners must be implemented as part of an overall plan to tackle catheterisation rates and urinary tract infections. Whipps Cross Hospital has successfully introduced a number of tools and strategies in order to reduce their catheterisation rate; as a result, the catheterisation rate at Whipps Cross is now 14%, this compares with a national average of approximately 15-20%.

Strategies they deployed include:

- Setting up a continence service with a Clinical Nurse Specialist in post
- Introduction of a link practitioner programme/continence champions
- Implementation of a comprehensive staff training programme in urinary catheterisation and bladder scanning
- Development of continence management documentation/urinary catheterisation bundle
- Implementation of a robust monitoring process to measure progress and ensure compliance with trust policies

The following sections discuss these strategies and tools in further detail:

**CLINICAL NURSE SPECIALIST (CNS)**

As part of their continence service, Whipps Cross Hospital has appointed a Clinical Nurse Specialist. Clinical Nurse Specialists have a responsibility for providing holistic advice and treatment based on advanced knowledge of the care required by individuals; in this case those with bladder, bowel or pelvic floor dysfunction. The role includes direct patient care and providing education and advice for healthcare personnel, or carers, on the importance of infection prevention.

The CNS takes a lead within the organisation to support reduction in the number of catheterisations and thereby the associated risks. Specific tasks include:

- Monitoring and supporting the targets for the reduction of catheter associated infections and baseline catheterisation rates
- Promoting accountability, responsibility and commitment regarding patient care standards amongst staff
- Keeping up to date with current research that is relevant to continence promotion and care and assisting in the dissemination of these activities internally; updating Link Practitioners via regular meetings and teaching sessions
- Maintaining audits of standards of continence care within the trust according to national and local requirement
- Leading on the development of competency frameworks and performance standards in relation to continence care
• Leading on the development of written trust policies, protocols and standards which relate to the management of continence in keeping with the national guidelines
• Supporting the Trusts Governance Framework with the monitoring of catheter-associated infections catheterisations rates.

A sample job description is included in Appendix 5.

**LINK PRACTITIONER PROGRAMME**

Whipps Cross Hospital has introduced a ‘Link Practitioner Programme’ for continence care. The programme provides a first point of contact for staff for advice on continence issues. This enables much broader coverage of the trust than a single Specialist Nurse is able to provide.

A link practitioner is a nominated qualified link in each clinical area with an interest in the management of bladder and bowel dysfunction. An educational programme for the links of 5-6 days per annum covers a range of issues in continence management.

The main duties and responsibilities of the link practitioners are:
• To promote and facilitate the implementation of updated guidelines, policies and standards of care relating to continence, colorectal and stoma care
• To participate in ward/department discussions and decisions regarding patient needs relating to continence, colorectal and stoma care
• To advise staff and colleagues on appropriate referrals to community services
• To make referrals to the continence, colorectal and stoma care services
• To develop and share knowledge and skills necessary to effectively manage and care for patients at risk of continence, colorectal and stoma care problems
• To exemplify cost effective and safe use of products and equipment
• To participate in quality monitoring of continence, colorectal and stoma care through the audit process
• To identify frequently arising concerns/ problems and incidents in their own clinical area
• To maintain information stands and folders for staff and patients

An example role description can be found in Appendix 6.

**STAFF TRAINING PROGRAMME**

The majority of manufacturers of PBUS devices recommend that training on the use of bladder scanning should be offered to all qualified staff (although recommendations vary). Trusts may want to consider offering training to nursing students and other unqualified health professionals e.g. Health Care Assistants.

In the production of this Guide, NTAC have found that the range of staff grades that are offered training varies across trusts. Trusts will therefore need to consider what training to offer according to their local needs and governance arrangements.

Whipps Cross Hospital has developed a training session on the use of bladder scanners which lasts approximately 45 minutes. The session is provided to all qualified staff and includes a presentation followed by a practical demonstration and a practical competency assessment. An example competence assessment form is included in Appendix 7.

The objectives of the course are to:
• Consolidate knowledge of normal bladder function
• Have an understanding of bladder ultrasound
• Know the clinical applications of portable bladder ultrasound scanners
Know how to interpret and act upon results
Know the importance of record keeping
Understand the importance of equipment maintenance
Be able to perform a portable bladder ultrasound scan

**AUDIT TOOL**
Use of a regular (ideally monthly) ‘snapshot’ audit can assist an organisation to gain information about the prevalence of UTIs and catheterisations in the trust.

An example from Whipps Cross Hospital is included in Appendix 8: Audit Tool. The tool allows for comparisons to be made between the number of patients who have short and long term catheters as well as the number of catheterisations amongst different age groups. Whipps Cross has found that routine use of the tool supports an increase in ward staff awareness of patients who are catheterised.

The audit tool uses a point prevalence approach and therefore it is essential that all data is collected during the same day in the month. The audit tool allows for calculation of the baseline catheterisation and UTI rate and measurement of the impact of any improvement strategies.

For all patients with a urinary catheter in situ the tool is used to collect patient level data on:
- Sex
- Age range
- Was the patient identified by the ward as having a UTI?
- Is the patient symptomatic according to the trust definition of a CAUTI?
- Is the patient on antibiotics?
- Does the patient have a short or long term catheter
- Is the catheter care bundle in place
- Is the collection bag on the floor?

In implementing the use of the tool, trusts would need to consider the practicalities of auditing every bed on a given day. One approach would be to utilise the link practitioners of each clinical area. However a proactive approach by one nominated individual is essential to ensure compliance.

It is important to note the tool can and should be modified by trusts to audit against other local priorities or issues in relation to catheter care.

Whipps Cross Hospital uses the audit tool to calculate the following metrics:

The **Catheterisation Rate**: defined as the number of patients with catheters is situ as percentage of the total number of inpatients

The **CAUTI Rate**: defined as the number of inpatients who have been diagnosed with the trusts definition of a CAUTI as a percentage of the total number of inpatients with catheters in situ.

**URINARY CATHETER CARE BUNDLE**
A care bundle is a collection elements of evidence based research which can be grouped together and delivered to specific groups of patients.

The formalisation of a care bundle allows a systematic approach to care delivery by ensuring uniformity of implementation. A care bundle can be used as local guidance, but is not intended as a replacement for clinical judgement.

An example of a urinary catheter care bundle from Whipps Cross Hospital is included in Appendix 9.
The bundle includes:

- Clarifying the rationale for catheterisation
  - To ensure that the reason for catheterisation is valid and is documented

- Calculating the residual urine volume
  - To document the bladder volume for patients in retention and to inform on future management particularly with regards to trial without catheterisation (TWOC).

- Ensuring effective consent
  - Documentation of patient consent is vital prior to the procedure of catheterisation (Royal College of Nursing 2012, p19)

- Selection of catheter type
  - Guidance on the selection of material and size of catheter, paying particular attention to latex allergies.

- Balloon inflation
  - Documentation of the balloon inflation volume to inform safe removal of catheter.

- Insertion using Aseptic Technique
  - A reminder of the standard practices for infection control following local policies and best practice.

- Daily checklists
  - This provides evidence that a daily review has taken place of the need for catheterisation and best practice has been followed.

- Definition of Catheter Associated Infection
  - As per an organisation’s definition of a CAUTI

- Discharge Planning
  - Provides a checklist/guidance for the discharge of a patient with a urinary catheter.

**LESSONS LEARNED FROM WHIPPS CROSS HOSPITAL**

In order to ensure that the benefits of technology implementation are realised, there are a number of operational service requirements (i.e. day-to-day issues surrounding the adoption of a technology which directly impact upon organisational activity) that trusts must meet. This section summarises some of the key lessons learned from implementation at Whipps Cross Hospital.

**COMPLIANCE WITH DOCUMENTATION OF SCANNER USE**

It is essential that all scans performed are correctly documented in the patient notes. This can be done by inserting the printout from the scanner into the notes. However, compliance with this can be problematic, particularly in cases where wards run out of thermal paper. Results can be hand-written if necessary; however the correct training, ordering process and communications plan can overcome this.

**EQUIPMENT MAINTENANCE**

The maintenance and upkeep of the equipment once on the wards can be problematic as it may be used by many different staff in a number of places. Trusts will need to put procedures in place to ensure that individual clinical areas take responsibility for their own scanners. A key person should be identified with responsibility for:
- Safe storage of the scanner
- Cleaning and decontamination
- Ensuring timely calibration and essential maintenance is carried out
- Monitoring the location of the scanners e.g. through the use of a log-book
- Re-ordering of the correct consumables, ultrasound gel in particular.

LEARNING FROM OTHER NHS TRUSTS

A theme that emerged in a number of trusts that NTAC have been in contact was that a number of bladder scanners had been rolled out into the trust on an ad-hoc basis over an extended period of time; this can lead to trusts having a variety of different scanners available.

ACKNOWLEDGEMENTS

NTAC would like to thank the following people for their role in the development of the guide:

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Christopher Chapple, Consultant Surgeon, Sheffield Teaching Hospitals NHS Foundation Trust
Zena Ludick, Deputy Operations Director, Hampshire Hospitals NHS Foundation Trust
Paul Hills, Head of Equipment Services, Nottingham University Hospitals NHS Foundation Trust
Stephen Miles, Clinical Nurse Specialist & Chair of RCN Continence Care Forum, Dorset Healthcare University NHS Foundation Trust
Angela Thompson, Director of Nursing and Patient Experience, East and North Hertfordshire NHS Trust
Melanie White, Clinical Nurse Specialist, Whipps Cross Hospital, Barts Health NHS Trust
Carlene Igbedioh, Continence Nurse Specialist, Guy’s and St Thomas’ NHS Foundation Trust
David Keane, Clinical Physicist, Leeds Teaching Hospitals NHS Foundation Trust
**Appendix 1: Summary of available PBUS technologies**

Data Sources: Manufacturer’s product information

<table>
<thead>
<tr>
<th>Manufacturer or UK Distributor</th>
<th>Verathon</th>
<th>Bard Medical</th>
<th>Cardiac Services</th>
<th>Sonosite</th>
<th>De Smit Medical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Website</td>
<td><a href="http://www.verathon.co.uk">http://www.verathon.co.uk</a></td>
<td><a href="http://www.bardmedical.co.uk">http://www.bardmedical.co.uk</a></td>
<td><a href="http://www.cardiac-services.com">http://www.cardiac-services.com</a></td>
<td><a href="http://uk.sonosite.com">http://uk.sonosite.com</a></td>
<td><a href="http://www.desmitmedical.com">http://www.desmitmedical.com</a></td>
</tr>
<tr>
<td>PBUS Products</td>
<td>BladderScan BVI 3000, 6100, 6400, 9600 &amp; 9400</td>
<td>Bardscan IIs</td>
<td>PTS Palm Bladder Scanner</td>
<td>M-Turbo</td>
<td>Cubescan Biocon 500 &amp; 700</td>
</tr>
<tr>
<td>On Supply Chain?</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Trademarked / patented terms</td>
<td>BladderScan NeuralHarmonics Technology</td>
<td>Bardscan</td>
<td>M Turbo</td>
<td>Cubescan</td>
<td>Biocon</td>
</tr>
<tr>
<td>Displays real-time ultrasound images?</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Basis</td>
<td>The scanner initially takes an image in the transverse plane. The transducer is then mechanically rotated about the antero-posterior axis and collects a further 11 ultrasound images. Aiming assistance, consisting of directional arrows is provided by the scanner.</td>
<td>The scanner takes an image in the transverse plane and then is manually rotated into in the sagittal plane where a further image is collected. Aiming is done by the operator using the real-time ultrasound image.</td>
<td>The scanner initially takes an image in the transverse plane. The transducer is then mechanically rotated about the antero-posterior axis and collects a further 11 ultrasound images. Aiming is done by the operator using the real-time ultrasound image.</td>
<td>The scanner takes an image in the transverse plane and then is manually relocated into in the coronal plane where a further image is collected. Aiming is done by the operator using the real-time ultrasound image. Markers are placed by the operator to identify the bladder wall. These products include additional functionality beyond bladder scanning.</td>
<td>The scanner initially takes an image in the transverse plane. The transducer is then mechanically rotated about the antero-posterior axis and collects a further 11 ultrasound images. Aiming is done by the operator using the real-time ultrasound image.</td>
</tr>
<tr>
<td>Manufacturer or UK Distributor</td>
<td>Verathon</td>
<td>Bard Medical</td>
<td>Cardiac Services</td>
<td>Sonosite</td>
<td>De Smit Medical</td>
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</tr>
<tr>
<td><strong>Calibration Procedure</strong></td>
<td>Certain models can be self-calibrated for £75/year with a calibration tank costing £60. All models can be returned for £310 - £850 dependent on model and level of cover.</td>
<td>Device returned to Bard in Crawley biennially at a cost of circa £550</td>
<td>Device can be returned to Amsterdam for calibration for c. £200 or a phantom bladder purchased for in house calibration for £1000</td>
<td>Calibration not required</td>
<td>Calibration can be done in-house provided the trust has purchased engineer training. Alternatively devices can be returned to De Smit Medical at a cost of £75</td>
</tr>
<tr>
<td><strong>Equipment Cost – NHS Supply Chain</strong></td>
<td>£7,200 - £8,321 depending on type of system</td>
<td>N/A</td>
<td>£6,005 - £6,689 – depending on configuration of system</td>
<td>£ 19,698.75</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Equipment Cost – Direct</strong></td>
<td>£8,780 - £11,929 depending on type of system</td>
<td>£9,082.50</td>
<td>£6,005 - £6,689 – depending on configuration of system</td>
<td>£24,375.00 (List Price)</td>
<td>£4995 - £5595 dependent on model</td>
</tr>
<tr>
<td><strong>Standard Warranty</strong></td>
<td>1 Year</td>
<td>1 Year</td>
<td>24 month warranty as standard (excludes calibration and misuse)</td>
<td>5 Years</td>
<td>2 year warranty as standard</td>
</tr>
</tbody>
</table>
| **Consumable Cost** | Trolleys - £433  
Battery Pack - £140 - £160  
Battery Charger - £216 - £488  
Thermal Paper - £18  
Ultrasound Gel - £64 | Trolleys - £624.75  
Battery Pack - £210  
Battery Charger - £66  
Thermal Paper - £19.20 (6 pack)  
Ultrasound Gel - £3.57 | Trolleys – usually included  
Battery Pack - £321.30  
Battery Charger - £357.00  
Thermal Paper - £241.55  
Ultrasound Gel – available from other manufacturers on Supply Chain | Trolleys - £1,419.50  
Battery Pack – n/a  
Battery Charger – n/a  
Thermal Paper & Ultrasound Gel – available from other manufacturers on Supply Chain | Trolleys - £450  
Battery Pack - £95 - £145  
Battery Charger - £175  
Printer Paper - £0.75 / roll  
Ultrasound Gel - £0.71 / 260g bottle |
| **Cost of Training** | FOC | FOC | All training is provided free of charge including refresher training where appropriate | Basic user training FOC  
Further courses available from £275 per person | User-training is provided FOC  
Engineer training is £1700 which allows trusts to use their internal medical engineering departments for calibration and component replacement. |
Appendix 2: Evidence & Links


Appendix 3: Technology Specification Document

**CORE SPECIFICATION: BLADDER SCANNERS**

This document describes the core requirements for dedicated bladder scanners (also referred to as bladder ultrasound devices). They are portable battery-operated ultrasound scanners that have been specifically designed to scan a patient's bladder to rapidly assess bladder volume, urinary retention, and post-void residual bladder volume.

**CORE COMPONENTS**

The required configuration and Technical Requirements for a bladder scanner

- Bladder scanner console
- Transducer

**COMPLIANCE WITH STANDARDS & LEGISLATION**

The system must be CE marked.

The system must comply with the requirements of the following:

- IEC 60601-1-5ER:2006 (Edition 1.0) Medical electrical equipment - All parts

**EQUIPMENT**

**BLADDER SCANNER CONSOLE**

- The bladder scanner shall be portable (i.e. hand-carried or hand-held)
- The bladder scanner shall operate on rechargeable batteries
- The bladder scanner shall have the capability to measure volumes in the range of 0-1500 ml
- The bladder scanner shall permit manually and automatic computation of the volume of urine in the bladder
- An integral printer is preferred
- Stand-mounting capability is preferred
- Boot up time to operation shall be less than 60 seconds
- Controls shall be easy to use

**TRANSUDER**

- The bladder scanner shall have a transducer capable of operating at a frequency of approximately 3 MHz for adult bladder assessment
- A transducer capable of operating at a frequency of approximately 5 MHz for paediatric bladder assessment is preferred
- Guidance of cleaning and disinfection of transducers must be provided
Appendix 4: Communications Plan

PORTABLE BLADDER ULTRASOUND SCANNERS

APPROACH TO COMMUNICATION AND ASSOCIATED ACTIVITIES

OVERVIEW & PURPOSE

In order to achieve successful implementation of Portable Bladder Ultrasound Scanners (PBUS) and a reducing UTIs Strategy, it is essential that all stakeholders are communicated with. It is recommended that a full Communication Plan is developed by the Implementation Team. This should sit alongside the project plan.

The purpose of this plan is to ensure that the right communication is delivered to the right audiences at the right time. This can help maintain the effectiveness of the workforce through transition and should allow stakeholders to participate through the avenues and forums provided.

COMMUNICATIONS OBJECTIVES & PRINCIPLES

OBJECTIVES

TO PROMOTE AND ENABLE LEADERSHIP

Mechanism: Provide information to enable leaders/clinical champions to be advocates for the implementation of PBUS.

TO DELIVER CONSISTENT BRIEFINGS TO ALL STAFF AND OTHER STAKEHOLDERS

Mechanism: Ensure that all staff/stakeholders are aware and have an understanding of how PBUS impacts on clinical practice and patient care pathways.

TO ENROL AND MOTIVATE STAFF

Mechanism: Develop a system to generate interest and buy-in for PBUS by sharing key updates and seeking ideas for improvement. This will ensure staff feel involved and have an opportunity to give feedback whilst receiving acknowledgement for their contributions.

TO MANAGE EXPECTATIONS

Mechanism: Provide ongoing feedback about the progress being made during implementation matched to project objectives. This will support management of staff perceptions/expectations and to ensure that staff realise that there may be short term drawbacks/hurdles prior to the long term benefits being realised.
**PRINCIPLES**

- Communication should be open, honest and factual and directed at the target audience
- All communication – spoken, written, and electronic – should be clear, easily understood, timely and up to date
- Communication should take multiple forms to reach the target audiences
- Two-way communication should be encouraged

**KEY AUDIENCES**

1. Trust Board
2. Clinical Staff (nursing, medical, surgical, ward staff, allied health professionals, community teams)
3. Patient/User Groups
4. Affected Internal Departments e.g., Finance, Procurement.

**COMMUNICATION TOPICS**

- Vision and goal for the implementation/adoption of PBUS
- Expected benefits (for the Trust and patients)
- Reason for Change
- Project Plan & Key Milestones
- Data reports publishing progress made
- Evaluation – Feedback post implementation
KEY MECHANISMS FOR COMMUNICATION

1. Workshops
2. Calendar of Meetings
3. Circulation lists
4. Publication of Project Plan
5. Agendas and Reports
6. Patient engagement (forums)
7. Promotional literature
8. Focus group sessions
9. Email memos
10. Trust Newsletters
11. Presentations at pre-scheduled meetings (managers, staff, Board)
12. Website/Bulletins
<table>
<thead>
<tr>
<th>Lead Member</th>
<th>Responsibilities</th>
<th>Communication Activity</th>
<th>Deadline/timeframe</th>
<th>Audience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Implementation</td>
<td>Responsible for clinical leadership, directing education, relationship building, identifying hurdles and promoting the implementation pathway</td>
<td>In-house training programmes, Presentations at pre-scheduled meetings, Liaison with other stakeholders, Online forums</td>
<td>At the initial early stages of the project</td>
<td>Clinical peers and other clinical staff, Trust Board</td>
</tr>
<tr>
<td>Project Lead/Clinical Champion</td>
<td></td>
<td></td>
<td>Ongoing throughout the project</td>
<td>Trust Board</td>
</tr>
<tr>
<td>Informatics</td>
<td>Responsible for the development &amp; implementation of audit tools</td>
<td>Produce data reports for publication in Bulletins, at project meetings and in Trust Newsletters</td>
<td>Ongoing throughout the project life.</td>
<td>All Stakeholders</td>
</tr>
<tr>
<td>Project Manager</td>
<td>To co-ordinate and align delivery of the communication plan with the project as whole</td>
<td>Schedule meetings, workshops, focus groups, develop circulation lists, produce newsletters, organise training, draft key reports</td>
<td>In line with project plan</td>
<td>All Stakeholders including the implementation team</td>
</tr>
<tr>
<td>Ward Managers</td>
<td>Responsible for supporting the implementation of audit tools</td>
<td>Schedule ward meetings, In-house training programmes</td>
<td>Ongoing throughout the project</td>
<td>Clinical peers and other clinical staff</td>
</tr>
<tr>
<td>Matrons/HONS</td>
<td>Responsible for clinical leadership.</td>
<td>Support senior staff with meetings and training</td>
<td>Ongoing throughout the project</td>
<td>Clinical peers and other clinical staff</td>
</tr>
</tbody>
</table>
Appendix 5: Clinical Nurse Specialist Job Description

**JOB DESCRIPTION**

**Post:** Clinical Nurse Specialist for Continence

**Grade:**

**Directorate:** Nursing

**Location:**

**Reports To:** Continence Nurse Manager

**Accountable To:** Continence Nurse Manager

**JOB SUMMARY**

The Continence Advisory Service is a hospital based service providing comprehensive advice, education and training in the assessment, planning, implementation and evaluation of packages of care, in relation to methods of promoting continence and management of incontinence. This will facilitate the ongoing development of a service that meets the needs of individuals suffering from bladder and/or bowel dysfunction which is fully integrated across primary, community and secondary care.

The post holder will be an independent Continence Nurse Specialist who will have the responsibility for providing holistic advice and treatment based on advanced knowledge of the care required by individuals with bladder, bowel or pelvic floor dysfunction. This may be by direct patient care or education and advice for healthcare personnel or carers. The post holder will take responsibility with the Continence Manager for the planning, implementation and evaluation of the Continence Advisory Service.

**KEY WORKING RELATIONSHIPS**

- Continence Nurse Manager
- Patients/ Clients, and Carers
- Patient Safety Committee
- Nursing & Midwifery Executive Group
- Nurse Specialist Group
- Clinical Governance Committee
- CQUIN Business Improvement Group
- Clinical Risk and Audit Team
- Information Systems/Performance Team
- Safeguarding Adults/Children’s co-ordinators
- Non-Medical Educational Team
- Heads of Nursing/Ward Managers
- Medical & Clinical Directorate Teams
- Therapists and Clinical Support Teams
- Regional Continence Advisory Groups
- Continence Nurse Specialists
- Primary Care Continence Nurse Specialists
- Voluntary Agencies, User Groups, General Public,
- Urology, Gynaecology and Colorectal Continence Specialist Services, Maternity Services
- Social Services
- Procurement team
- Local NHS Hospital Trusts and Foundation Trusts
- Local PCTs
- External Contractors /Agencies
- Any other deemed necessary

**CLINICAL PRACTICE AND PRACTICE DEVELOPMENT**

1. To manage a defined caseload of patients with complex bladder and bowel problems in a variety of settings.
2. Offer support, counselling, advice and guidance to patients, their families and carers.
3. Accept referrals for those people requiring specialist assessment and hold a defined case load of patients requiring specialist continence care.
4. Assess, plan, implement and evaluate specialist programmes of care for patients in order to promote continence and manage incontinence.
5. Provide full assessment including examination and identification of pelvic floor function, flow rate measurements and urinary residual volumes. Formulate treatment plans, including pelvic floor exercise programmes, clean intermittent self-catheterisation and recommendations for medications.
6. Act as an advisor to nursing and other staff in relation to continence care and promotion, with specific responsibility for new Nursing Documentation and patient information.
7. To support the strategic development and direction for current services.
8. Independently keeps updated in relevant research, trends, developments and national recommendations, which relate to the speciality of continence care.
9. To complete accurate statistical data and other returns promptly in accordance with the information needs of the service.
10. 
DEVELOPING PRACTICE IN LINE WITH RESEARCH

1. Monitoring and supporting the CQUIN targets for the reduction of catheter associated infections and baseline catheterisation rates. Monitoring and supporting the prevention of moisture lesions.

2. Monitoring and supporting the Business Efficiency Plan, providing monthly feedback.

3. Promote accountability, responsibility and commitment regarding patient care standards amongst staff.

4. To keep up to date with current research that is relevant to continence promotion and care and assist in the dissemination of these activities internally. Update Link Practitioners via regular meetings and teaching sessions.

5. To participate in research projects with a view to improving professional practice.

6. To initiate audit of standards of continence care within the trust according to national and local requirement. Participate in the Royal College of Physicians Audit.

7. To support the Continence Manager to update, implement and monitor Trust policies, procedures and protocols in line with relevant national guidance around continence and bowel care.

8. Participates in formulating, interpreting, implementing and educating objectives, policies and procedures of nursing care.

9. To take part in organisation and monitoring of the continence products provided in the trust.

10. To use evidence based practice to develop and maintain a high quality clinically effective and cost effective service.

FINANCIAL

1. Advocates and demonstrates a Continence Service management approach which is patient-centred, individualised, holistic, non-judgmental, evidence-based and cost-effective.

2. Promotes awareness of cost effective approaches to the use of continence products, which demonstrates appropriate products which are value for money.

MANAGEMENT AND LEADERSHIP

1. To co-ordinate a quality, cost effective and efficient incontinence supply which meets the needs of the clients in co-operation with the Continence Manager.

2. To maintain accurate records of patient care in compliance with the NMC standards for records and record keeping.

3. To prioritise and manage time and workload effectively.

4. To work with the Continence Manager in developing a strategy for an effective and integrated continence service across primary and acute care that meets the needs of adults and children.

6. To be a credible and visible source of expertise and support within the Trust and an effective role model, working at Masters Level.

7. To lead in the contract monitoring process and to be involved in the tendering process for contracts relating to continence products.

8. Leads in the development of written trust policies, protocols and standards which relate to the management of continence in keeping with the national guidelines.

9. Exemplifies and proactively engages in Nursing Leadership in pursuit of promoting safe practices and protecting patient safety through development and operation of Continence Service systems of escalation, notification and resolution of identified Continence Service unsafe clinical practices and clinical incident processes. Supports the Trust's Governance Framework with the monitoring of the following incidents: Catheter-associated infections, Catheterisations Rates, Moisture-Related lesions and other identified clinical incidents related to Continence Care.

**COMMUNICATION/SERVICE DEVELOPMENT**

1. As a member of the Continence Advisory Team, ensure effective communication and working relationships in order to maintain a coordinated team approach.

2. Raise awareness of the service by dissemination of information about the service across the trust and to the general public. Develop and keep up-to-date a Trust Continence information intranet site.

3. To develop and maintain a close liaison with the acute and secondary health care settings and to promote a positive working relationship.

4. Lead in national and public awareness programs with regard to bladder and bowel problems. Organise and support a bi-annual conference.

5. To network both locally and nationally.

6. Set up a patient user group.

**EDUCATION, TRAINING AND MENTORSHIP**

1. To lead in the planning and development of education programmes for employees within the Trust and other groups/individuals caring for people with bladder and/or bowel dysfunction. Directed at all levels of staff including junior and senior doctors and others allied to medicine.

2. Provide clinical teaching as required in a variety of settings, in co-ordination with educational establishments and the acute trust. Including courses for income generation.

3. To mentor student nurses / staff wishing to experience the role of the Continence Nurse Specialist.

4. Delivers patient education using defined benchmarks and set goals, either in group sessions or one-to-one. Gives guidance on Continence issues and products giving constructive feedback using audio-visual or written aids.

5. Leads and teaches on:
   - Digital Rectal Examination 1 day course
   - Male Catheterisation 1 day course
- Mandatory training
- Emergency Care programme
- Ward-based training
- Student Nurse training
- Foundation students training
- Health-care supports workers Continence Update
- Ward based training

PERSONAL AND PROFESSIONAL DEVELOPMENT

1. Comply with the NMC code of professional conduct and relevant professional guidelines.

2. To maintain and update knowledge and skills whilst undertaking continuing education in accordance with personal and service need at Masters level within a framework of a personal development plan.

3. To network externally and utilise opportunities for development provided by external bodies and agencies and continence specialist nurses working elsewhere within the sector. Including being co-chair of the Continence Advisory Group.

4. To work within local and national clinical and operational standards and guidelines.

5. Identifies of own personal, professional, educational and development needs to enhance this specialist role. This is in keeping with professional standards (PREP), the NHS Knowledge and Skills Framework (KSF) and the Trusts Personal Development Review PDR Policy.

6. Liaises with Continence Manager to plan and organise the satisfaction of own educational needs.

7. Independently keeps updated in relevant research, trends, developments and national recommendations such as: Essence of Care, NICE, Knowledge and Skills Framework (KSF), CQC.

8. Participates in professional networks locally and nationally which support the development of the Continence Service and standards as directed.

9. Willingly engages in structured reflection of own professional practice by way of clinical supervision to improve own professional competency.

PERSONAL DEVELOPMENT

1. Proactively and directly imparts specialist knowledge and shares specialist skills with patients, nurses, managers, medical teams and professions allied to medicine in the clinical areas of all Trust specialities to affect informal learning.

2. Demonstrate specialised decision making skills, working under the direction of and in consultation with the Continence Manager to identify, analyse, challenge and halt poor practice to facilitate improved standards of practice.

ADMINISTRATIVE

1. Produces an annual report for the Continence Service.
2. Responds to requests for Continence Service advice by telephone and with care setting visits.

3. Accurately and systematically records information and data that relates to monitoring of the Continence Service activity and patient visits.

4. Typing and dissemination of documents, letters, memos, and teaching materials which relate to the Continence Service advisory and educational services, specialist strategic development and own professional development.

5. Answers the team and own telephone with accurate and systematic recording of messages for professional colleagues.

6. Organises training programmes, meetings, patient visits, with provision of the appropriate facilities and resources as directed by the Continence Manager.

GENERAL RESPONSIBILITIES

The post-holder is required to maintain a high standard of personal development and to comply with Trust policies and procedures including attendance at any training sessions required.

CONFIDENTIALITY

During the course of your employment you may have access to, see or hear information of a confidential nature and you are required not to disclose such information, particularly that relating to patients and staff.

In order to comply with the Data Protection Act 1998 you must not at any time use personal data held by the Trust for any unauthorised purpose or disclosure such as data to a third party.

You must not make any disclosure to any unauthorised person or use any confidential information relating to the business affairs of the Trust, unless expressly authorised to do so by the Trust.

HEALTH AND SAFETY

You must co-operate with Management in discharging its responsibilities under the Health and Safety at Work Act 1974 and ensure the agreed safety procedures are carried out to maintain a safe environment for patients, employees and visitors.

EQUAL OPPORTUNITIES

You are at all times required to carry out your responsibilities with due regard to the Trust’s Equal Opportunities Policy and to ensure that staff receive equal treatment throughout their employment with the Trust.

CODE OF CONDUCT OF PROFESSIONAL GROUP

All staff are required to work in accordance with their professional group's code of conduct.

INFECTION CONTROL

Infection control is everyone’s responsibility. All staff, both clinical and non-clinical, are required to adhere to the Trust’s Infection Prevention and Control policies and make every effort to maintain high standards of infection control at all times thereby reducing the risk of Healthcare Associated Infections.
VULNERABLE GROUPS FOR ALL STAFF

To carry out responsibilities in such a way as to minimize the risk of harm to children, young people and vulnerable adults and to promote their welfare in accordance with the Children Act 1989 and 2004, Working Together to Safeguard Children (2006) and No Secrets (DH 2000)

This job description is intended as a guide to the main duties and responsibilities of the post and may be subject to change. Such change will only take place following consultation and agreement between the post holder and Directorate Team.

This Job Description is not exhaustive, and may be amended, in consultation with the post-holder, to reflect changing needs of the service.
## Person Specification

<table>
<thead>
<tr>
<th>Category</th>
<th>Requirement</th>
<th>Essential (E)</th>
<th>Desirable (D)</th>
<th>Assessed through:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Education &amp; professional Qualifications</strong></td>
<td>Registered Nurse (1&lt;sup&gt;st&lt;/sup&gt; Level)</td>
<td>E</td>
<td></td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>ENB 978 or equivalent: Promotion of Continence, Management of Incontinence</td>
<td>E</td>
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<td>A</td>
</tr>
<tr>
<td></td>
<td>ENB 998 or relevant teaching qualification (TICS) Teaching in the Clinical Setting</td>
<td>E</td>
<td></td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Degree in Nursing or Masters qualification</td>
<td>E</td>
<td></td>
<td>A</td>
</tr>
<tr>
<td><strong>Experience</strong></td>
<td>Significant experience working in a senior role e.g. Band 6</td>
<td>E</td>
<td></td>
<td>A/I</td>
</tr>
<tr>
<td></td>
<td>Experience of assessing continence needs, in a hospital or community setting</td>
<td>E</td>
<td></td>
<td>A/I</td>
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<tr>
<td></td>
<td>Evidence of taking responsibility for self-directed learning and continuous professional development</td>
<td>E</td>
<td></td>
<td>A/I</td>
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<tr>
<td></td>
<td>Experience of supporting and developing junior staff</td>
<td>E</td>
<td></td>
<td>A/I</td>
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<tr>
<td></td>
<td>Previous experience in setting and auditing standards</td>
<td>E</td>
<td></td>
<td>A/I</td>
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<tr>
<td><strong>Knowledge</strong></td>
<td>Understanding of the use of clinical guidelines or care pathways</td>
<td>E</td>
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<td></td>
<td>Understanding of issues involved in offering a service to a diverse community</td>
<td>E</td>
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<tr>
<td></td>
<td>Understanding of the need to manage resources, both staffing and budgets</td>
<td>E</td>
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<tr>
<td></td>
<td>Understanding of responsibilities under the Health and Safety at Work Act, and of risk management</td>
<td>E</td>
<td></td>
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<tr>
<td>Skills and Abilities</td>
<td>Knowledge of infection control principles and procedures and ability to deal with infective and waste material</td>
<td>E</td>
<td>A/I</td>
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<td></td>
<td>Ability to teach, supervise and develop practice in others</td>
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<td></td>
<td>Ability to demonstrate advanced clinical skill/advance practice</td>
<td>E</td>
<td>A/I</td>
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<td></td>
<td>Ability to communicate</td>
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<td>A/I</td>
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<td></td>
<td>A sound knowledge of current issues in nursing practice</td>
<td>E</td>
<td>A/I</td>
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<td></td>
<td>Excellent oral and written communication skills, for effective communication internally and externally</td>
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<td>I</td>
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<tr>
<td></td>
<td>Ability to set and prioritise personal and service objectives and plan activities to achieve these, with evidence of flexible response to change</td>
<td>E</td>
<td>A/I</td>
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<tr>
<td></td>
<td>Familiarity with basic computer and e-mail skills</td>
<td>E</td>
<td>A/I</td>
<td></td>
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<tr>
<td>Others</td>
<td>Demonstrate knowledge of NMC Code of Professional Conduct</td>
<td>E</td>
<td>I</td>
<td></td>
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<tr>
<td></td>
<td>Presents self in a professional manner that instils confidence in patients, carers and others</td>
<td>E</td>
<td>I</td>
<td></td>
</tr>
</tbody>
</table>

Key: A = Application Form   I = Interview   S = Selection Test
Appendix 6: Link Practitioner Job role & Person Specification

Role Description
Continence, Colorectal and Stoma Link Practitioner

Role Summary

- To maintain Continence, Colorectal and Stoma Link Practitioner educational resource folder
- To improve and promote evidence based Continence, Colorectal and Stoma practice in the work area. Demonstrated by feedback presented at link days
- Act as an educational resource for other staff and student nurses on care and quality issues relating to Continence, Colorectal and Stoma Care
- To liaise with Clinical Nurse Specialists on issues or concerns relating to Continence, Colorectal and Stoma Care
- To disseminate information to ward staff given at each Link Practitioner day within 1 month of session. Link day summary to be signed by ward manager once the information has been circulated. This will be monitored and audited by the Clinical Nurse Specialist
- To assist with audits and participate in policy writing

Key Working Relationships

- Nurse Specialists for Continence, Colorectal and Stoma
- Ward/Departmental Manager and dept/ward team
- Multidisciplinary Team, including infection Control, Moving and Handling, Tissue Viability, Nutrition, Dietician, Pharmacist, Occupational therapist, Doctors, Pain, Physiotherapist, and Palliative teams

Essential Requirements

- Managerial Support
- Personal interest in Continence, Colorectal and Stoma Care topics and practice
- RGN or HCA
- Effective interpersonal and communication skills
- Commitment to development of the Link Practitioner Role

Desirable Requirements

- Min 6 months post registration experience
- Teaching in the clinical setting
- Interest in attending:
  1. Promotion of Continence, Management of Incontinence Course
  2. Male Catheterisation Course
  3. Digital Rectal Examination Course

Main Duties/Responsibilities to include:

- Promote and facilitate the implementation of updated guidelines, policies and standards of care relating to Continence, Colorectal and Stoma Care
- Participate in ward/dept discussions and decisions regarding patient needs relating to Continence, Colorectal and Stoma Care
● Advise staff and colleagues on appropriate referrals to community services

● To make referrals to the Continence, Colorectal and Stoma Care services

● To develop and share knowledge and skills necessary to effectively manage and care for patients at risk of Continence, Colorectal and Stoma Care problems

● Exemplify cost effective and safe use of products and equipment

● Participate in quality monitoring of Continence, Colorectal and Stoma Care through the audit process

● Identify prevalence of concerns/problems and incidents in own area

● Maintain information stands and folders for staff and patients

I/We have read and understand the Continence, Colorectal and Stoma Care Link Practitioner Role Description

LINK PRACTITIONER NAME
SIGN
DATE
WARD MANAGER NAME
SIGN
DATE
Appendix 7: Competency Assessment Form

**PORTABLE BLADDER ULTRASOUND SCANNER (PBUS) COMPETENCY ASSESSMENT**

| Surname: ___________________ First Name: ___________________ Title: ________ |
| Job Title: ___________________ Ward/Dept: ___________________ |
| Directorate: ___________________ Contact No: ___________________ |

**IDENTIFICATION OF THE COMPONENTS OF THE PBUS**

| Can identify the location of the battery | □ |
| Can identify the location of the printer | □ |
| Can identify the location of the scan button | □ |
| Can identify the location of the gender/mode button | □ |
| Can identify the location of the power button/switch | □ |
| Can identify the location of the function keys | □ |
| Can identify the location of the scan head/transducer | □ |

**BATTERY**

| Can state how long the battery will last when constantly used | □ |
| Can state how long it takes for the battery to charge | □ |
| Can demonstrate how to remove and charge the battery | □ |

**SETTING UP**

| Can demonstrate how to switch the unit on and off | □ |
| Can demonstrate how to set the date and time | □ |
| Can demonstrate how to correctly insert paper into the printer | □ |

**PATIENT**

| Can state the importance of obtaining patient consent prior to scanning | □ |
| Can demonstrate the correct positioning of the patient | □ |
| Can state how to promote patient dignity throughout the procedure | □ |

**TAKING A SCAN**

| Can identify which mode the unit is set to | □ |
| Can demonstrate the modes which can be used for scanning a woman and the indication for each | □ |
| Can demonstrate which mode should be used for scanning paediatric patient (where applicable). | □ |
| Can demonstrate where the transducer should first be positioned | □ |
| Can demonstrate where the second transducer position (certain PBUS models only) | □ |
| Can demonstrate how to ‘aim’ the transducer on the bladder | □ |
Can state the significance of the supra-pubic bone .................................................................
Can state the importance of ultrasound gel ..............................................................................
Can state how much ultrasound gel should be used and how it should be distributed ..............
Can demonstrate the correct angle the transducer should be held at .....................................
Can demonstrate the correct pressure to be exerted during scanning ....................................
Can state how the size of the patient affects how to position the transducer ............................
Can state the importance of obtaining three concordant results ...........................................
Can demonstrate how to print scan results ..............................................................................
Can state what should be done with printed results ..............................................................
Can demonstrate how to save a scan ........................................................................................

KNOWLEDGE

Can state the clinical indications for using a PBUS .................................................................
Can state the normal bladder capacity .....................................................................................
Can state the bladder's average hourly and daily output ........................................................
Can state the accuracy range of the PBUS ..............................................................................
Can state if you can use the PBUS on a patient with a Foley catheter in situ ..........................
Can explain why the volume voided or drained by catheterisation may be less than the scan result
Can state the alternative to a PBUS to measure residual volume ...........................................
Can state how long after voiding a scan should be performed .............................................
Can identify appropriate further action to be taken if the results are abnormal ....................

MAINTENANCE

Can state the purpose and importance of calibration ..............................................................
Can demonstrate how to find out when the PBUS is due for calibration ...............................  
Can state who can calibrate the PBUS ....................................................................................

CERTIFICATION

I certify that: .................................................................................................................................

has completed their training in the use of PBUS and is competent to use these products within this trust without further training.

Signed: ___________________________________________ Date: _____________

Print Name: ____________________________________________________________
Appendix 8: Audit Tool

A screenshot of the audit tool is pictured below.

Audit Form: IDC & CAUTI Rate

<table>
<thead>
<tr>
<th>Hospital Number</th>
<th>Male or Female</th>
<th>Age Range</th>
<th>Diagnosed UTI (Yes/No)</th>
<th>Clinical signs and symptoms - if yes please state: Fever&gt;38°C, Urgency, Frequency, Dysuria, Suprapubic tenderness, New or sudden onset of confusion</th>
<th>Is the patient on antibiotics for treatment of UTI (if yes please state which one)</th>
<th>Specify if short term or long term catheters</th>
<th>Is there a Catheter Care Bundle in place? Yes/No</th>
<th>Is the catheter bag touching the floor? Yes/No</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

The electronic version of the Audit Form is available by clicking on this icon:
# Appendix 9: Urinary Catheter Care Bundle

**Whipps Cross University Hospital Trust**

**Urinary Catheter Care Bundle**

<table>
<thead>
<tr>
<th>Patient Name:</th>
<th>Hospital Number:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Bundle Started:</td>
<td>Ward / Area:</td>
</tr>
</tbody>
</table>

### Clock Starts:
- Date Catheter Inserted: ...........................................
- Time Catheter Inserted: ...........................................
- Inserted by (name): .............................................
- Professional status: Doctor □ Nurse □
- Other (please state): .............................................
- Signature / Name Stamp ........................................

<table>
<thead>
<tr>
<th>BLADDER SCAN PERFORMED</th>
<th>YES □ NO □</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residual Volume ..........mls</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PATIENT CONSENT OBTAINED</th>
<th>YES □ NO □</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>REASON FOR CATHETERISATION</th>
<th>If consent NOT obtained state why…</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retention □ Residual volume ..........mls</td>
<td></td>
</tr>
<tr>
<td>Fluid Monitoring □</td>
<td></td>
</tr>
<tr>
<td>Intra / Post Operative □</td>
<td></td>
</tr>
<tr>
<td>Spinal / Epidural □</td>
<td></td>
</tr>
<tr>
<td>Treatment Bladder Washout /Installation □</td>
<td></td>
</tr>
<tr>
<td>Intractable Incontinence □</td>
<td></td>
</tr>
<tr>
<td>Other □</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CATHETER CHOICE</th>
<th>YES □ NO □</th>
</tr>
</thead>
<tbody>
<tr>
<td>URETHRAL □ SUPRAPUBIC □</td>
<td></td>
</tr>
<tr>
<td>SHORT TERM □ LONG TERM □</td>
<td></td>
</tr>
</tbody>
</table>

- O Latex allergy – Use PTFE coated latex catheter
- Latex allergy – Use Silicone Catheter

<table>
<thead>
<tr>
<th>Standard Length</th>
<th>Haematuria Debris TURP TURBT</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 CH □</td>
<td>State Size ......................CH</td>
</tr>
<tr>
<td>14 CH □</td>
<td></td>
</tr>
<tr>
<td>16CH □</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Paediatric</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Length</td>
<td>Haematuria Debris TURP TURBT</td>
</tr>
<tr>
<td>12 CH □</td>
<td>State Size ......................CH</td>
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<td>14 CH □</td>
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<td>16CH □</td>
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</table>

| Paediatric | |

### INSERTION TECHNIQUE / EQUIPMENT SELECTION

<table>
<thead>
<tr>
<th>YES</th>
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<tbody>
<tr>
<td>Hand Hygiene</td>
<td>Sterile Gloves</td>
</tr>
<tr>
<td>Apron / Gown</td>
<td>Urethral meatus cleaned prior to insertion (0.9% normal saline)</td>
</tr>
<tr>
<td>Sterile Field</td>
<td>Anaesthetic Gel Used</td>
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<tr>
<td>Balloon Inflation 10ml *If catheter is inserted with inflation ›10ml state ml ..........inflated</td>
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### MALE CATHETERISATION

- Foreskin Replaced □
Urinary Catheter
Daily Maintenance Care Bundle

DATE COMMENCED:

CATHETER STICKER
Attach peelable catheter stickers here…..

Insertion details

CATHETER STICKER
Attach peelable catheter stickers here…..

Catheter Type / Lot No

Catheter Specimen Urine (CSU)

CSU’s are ONLY to be taken if there is a clinical suspicion of infection, with the exception of Critical Care patients

<table>
<thead>
<tr>
<th>Date</th>
<th>YES</th>
<th>NO</th>
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</table>

IS THE PATIENT SYMPTOMATIC: PLEASE TICK SYMPTOMS

<table>
<thead>
<tr>
<th>Fever &gt;38°C</th>
<th>Urgency</th>
<th>Frequency</th>
<th>Dysuria</th>
<th>Suprapubic tenderness</th>
<th>Increased / New onset of confusion</th>
</tr>
</thead>
</table>

To diagnose a healthcare-associated UTI the symptoms must meet the following criteria:

**Criterion**

At least TWO of the following signs/symptoms with NO other recognised cause:

- Fever >38°C
- Urgency
- Frequency
- Dysuria
- Suprapublic tenderness
- Increased / New onset of confusion

AND

At least ONE of the following:

- Positive dipstick for leukocyte esterase and/or nitrate
- Pyuria (urine specimen with >80 WBC/mm³, on UF-100 analyser in Whipps Cross laboratory)
- At least 2 urine cultures with repeated isolation of the same uropathogen (gram-negative bacteria or S. saprophyticus with \( \geq 10^2 \) colonies/ml in nonvoided specimens
- \( \geq 10^5 \) colonies/ml of a single uropathogen (e.g. gram-negative bacteria or S. saprophyticus)

Acute Hospitals

A urinary tract infection is deemed to be hospital-associated if the symptoms begin >48hrs after admission to the hospital.
<table>
<thead>
<tr>
<th>DAY</th>
<th>Date</th>
<th>IS THE CATHETER STILL NEEDED?</th>
<th>DRAINAGE BAG BELOW LEVEL OF BLADDER, OFF THE FLOOR</th>
<th>GLOVES WORN - MANIPULATE CATHETER PRECEDED &amp; FOLLOWED BY HAND HYGIENE</th>
<th>URETHRAL MEATAL HYGIENE PERFORMED</th>
<th>CATHETER CIRCUIT NOT BROKEN (EXCEPT FOR GOOD CLINICAL REASON)</th>
<th>OVERNIGHT LINK SYSTEM DISCARDED (Leg bags only)</th>
<th>SIGN &amp; DESIGNATION</th>
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</table>

**DAY 28 – Short Term Catheter (if the catheter is still required – re-catheterise (consider long term catheter if indicated))**

**DAY 28 - Long Term Catheter (If the catheter is still required continue with bundle and use a blank continuation sheet for the daily checklist)**
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</table>

**DAY 28** – Short Term Catheter (if the catheter is still required – re-catheterise (consider long term catheter if indicated)

**DAY 28** - Long Term Catheter (If the catheter is still required continue with bundle and use this blank continuation sheet for the daily checklist)
Discharge Information

If a patient is discharged from hospital or outpatients with a urinary catheter in situ, the patient must be seen by a trained practitioner within 48 hours. The appropriate referrals and letters must be made and supplied to:

- G.P./District Nurse or Nursing Home/patient
- The Urology Department must be informed if a first change of a supra-pubic catheter is required

The patient must be sent home with:

- Discharge Homepack (Including: Equipment to Catheterise)
- Catheter Diary
- The ability to empty the urine bag
- Know when to change the urine bag (5-7 days)
- The ability to attach the night bag

If the patient is unable to do any of the above alternative arrangements must be made. Consider referral to Continence Service.

| Appropriate referrals must be made to: |  |
|----------------------------------------|  |
| GP: □                                   | Date…….. District Nurse: □ Date…….. |
| Community Continence Service: □ Date…….. | Nursing Home / Residential Home: □ Date…….. |
| Home Delivery Service: □ Date…….. Other: □ Date…….. |

Date of out patient appointment for supra pubic catheter change:

Date Catheter Removed / / 
Print Name & Sign
**Catheter Associated Urinary Tract Infections (CAUTIs):** there is no universal definition. It is considered to be an infection that may have symptoms and is in the urinary tract. It usually occurs either while the catheter is indwelling or 48hrs following insertion of a urinary catheter.

**Catheter Samples:** Samples of urine from patients with an indwelling urinary catheter.

**Hospital Acquired Infection (HAIs):** An infection that usually first appears three days after a patient is admitted to a hospital or other healthcare facility. Infections acquired in a hospital are also called nosocomial infections.

**Nosocomial Infection:** Infections that have been caught in a hospital

**Portable Bladder Ultrasound Scanner:** A portable, non-invasive method of assessing bladder volume and other bladder conditions using ultrasonography to determine the amount of urine retention or post-void residual urine.

**Postoperative Urinary Retention:** The inability to completely void the urinary bladder after an operation.

**Post Void Residual:** The amount of urine left in the bladder after emptying.

**Suprapubic Aspiration (SPA):** A procedure for draining the bladder performed by inserting a sterile needle through the skin above the pubic arch and into the bladder.

**Urinary Incontinence:** The unintentional loss of urine. The inability to hold urine in the bladder due to loss of voluntary control over the urinary sphincters; resulting in the involuntary passage of urine.

**Urinary Retention:** The inability to completely empty the bladder of urine.

**Urinary Tract Infection:** Infection in one or more of the structures that make up the urinary system.