Select the smallest gauge catheter that will allow free urinary flow. The recommended size is 12-14 charriere(ch) with a 10ml balloon for adults. Supra-pubic catheterisation requires a size 16ch to maintain the tract patency and facilitate catheter replacement.

It is important to choose the correct catheter for the individual patient. The following should be considered: the material, size, length and balloon infill volume of the catheter. The make, type, length, Ch/Fg size and balloon size should be specified on the prescription.

The term Foley catheter is used to describe an indwelling catheter that is retained by inflating an integral balloon. Catheters without the inflating balloon are usually used for intermittent self-catheterisation (ISC).

**Materials**

These determine the length of time a catheter can remain in situ. However, it is the product liability stated by the manufacturer that should be heeded. Some companies have different warranties dependant on where the catheter is used, e.g. urethrally or supra-pubically.

**Short/Medium Term – 7 to 28 days:**
- Plastic/PVC: should not be left in situ more than 7 days
- Uncoated latex/silicone treated: should not be left in situ more than 7 days
- Polytetrafluoroethylene, (P.T.F.E) bonded Latex (Teflon™): should not be left in situ more than 28 days
- Silver alloy coated latex: should not be left in situ more than 28 days

**Long Term (up to 12 weeks):**
- Silicone elastomer coated latex: combines advantages of silicone and latex
- Hydrogel coated latex: combines advantages of hydrogel and latex
- All silicone and hydrogel coated silicone: combines advantages of hydrogel and silicone; they are the only catheters suitable for patients with latex allergy (Pomfret 2001)

There are other issues concerned with silicone and latex catheters, please see later in this document.

If a Health Care Professional (HCP) makes the decision to leave an indwelling catheter in place for longer than recommended by the manufacturer and than it is licensed for, then they take responsibility for the functioning of the catheter and the manufacturer is no longer liable.

**Sizing**

**Sizes**
The external diameter of a catheter is measured in Charriere (Ch) – one Ch equals ⅓mm, therefore 12 Ch equals 4mm.

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<tbody>
<tr>
<td>Female</td>
<td>12 – 14 Ch</td>
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<tr>
<td>Male</td>
<td>12 – 16 Ch</td>
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The smallest size should be chosen to provide adequate drainage. Larger sizes can cause irritation and bypassing of urine around the catheter. The larger sizes are usually reserved for clot drainage (post-operatively) and stricture dilation. In any situation their use should be questioned.

**Lengths**

- Female 26cms*
- Paediatric 30cms*
- Standard 43cms*

*Approximately, as there is variety between manufacturers.

A female length catheter can be used in women unless they are obese or chair bound, in which case standard length may improve drainage. A standard length catheter can be used for both genders in all care settings, especially for patients in bed. The inadvertent use of a female length catheter in a male patient may cause severe urethral trauma and potentially be fatal.

**Balloon size**

- Routine 10mls
- Post prostatic surgery 30mls

30ml balloons should only be used in specific circumstances such as post prostatic surgery, but their use should always be questioned. The heavier weight and larger balloon may cause bladder spasm and irritation of the trigone.

Catheter balloons should be filled as specified by the manufacturer. They should never be over or under filled as this can lead to a miss-shaping of the balloon that can interfere with urine drainage.

The balloon should always be filled with sterile water, never:

- Air, as the balloon would float above the urine, preventing drainage
- Tap water, as it contains soluble salts that may precipitate out of the solution and block the inflation channel
- Saline, as crystals of salt may form in the inflation channel preventing deflation of the balloon at a later stage

**Drainage systems**

Indwelling catheters must be connected to a sterile urinary drainage system or catheter valve. Healthcare personnel must ensure that the connection between the catheter and the urinary drainage system is not broken except for good clinical reason (e.g. changing the drainage bag in accordance with manufacturer’s recommendations).

Ambulatory patients should use a leg drainage system where the bag is supported. If an overnight bag is required a single non-drainable bag should be used which is attached to the day bag therefore maintaining a closed link system.

Drainage bags with an outlet tap, which attach directly to the catheter must be sterile, and may normally remain in place for 5-7 days in accordance with manufacturer’s recommendations, or be changed earlier if damaged, leaking or when there is an accumulation of sediment.

The drainage bag must be kept below the level of the bladder at all times to drain, with the exception of belly bags.

Drainage bags should be emptied when they are approximately three quarters full.

Appropriate stands must be provided to prevent contact of the bag with the floor, including the outlet tap.
Never wash urine bags and reconnect them in any care setting. Catheter bags are single use only once disconnected they must be disposed of. Antiseptic or antimicrobial solutions must not be added to drainage bags.

**Storage of catheters and drainage bags.**
- Store in a dry, well-ventilated area away from sunlight
- Store in original packaging

Please refer to Indwelling Urinary Catheters Information Leaflet for Patients and Cares and guidance leaflet on using the Catheter Passport.

**Catheter Valves**
Catheter valves can be used as an alternative to a drainage system. Valves are inserted into the end of the catheter, allowing bladder filling and intermittent drainage. However, catheter valves may be inappropriate with patients with:
- Poor bladder capacity
- Detrusor over activity
- Ureteric reflux
- Renal impairment
- Catheterisation following acute urinary retention
- Immediately after prostate surgery

Patients need to be able to manipulate the valve and empty the bladder regularly to avoid leakage (especially with suprapubic catheters), overfilling and subsequent back flow to the upper urinary tract. A spigot is not an alternative to a catheter valve, as it requires removal to allow drainage.

There is significant evidence of the benefits of patient comfort and independence with the use of valves. However, the use of a valve should be a multidisciplinary decision involving patient’s GP, Urologist and community nurse where appropriate.