Appendix C. Sample Bladder Scan Policy

# Purpose

To provide guidelines for the use of a bladder scanner.

# Definition

The bladder scan measures ultrasonic reflections within the patient’s body to differentiate the urinary bladder from the surrounding tissue. It is a noninvasive portable tool for diagnosing, managing and treating urinary outflow dysfunction.

Bladder scans—

* Determine the need for catheterization.
* Reduce the unnecessary placement of a urinary catheter.
* Provide quick measurements for postvoid residual (PVR) and/or bladder capacity.

# Policy

1. A bladder scan should be considered for use with patients exhibiting acute or chronic urinary dysfunction.
2. A bladder scan should not be used if the patient has open skin or a wound in the suprapubic region, or if the patient is pregnant.
3. A bladder scan should not be used in the presence of flammable anesthetics.
4. If a bladder scan is used to assess for postvoid residual (PVR)—
   1. The amount voided should be documented on the report.
   2. If the PVR is greater than 300–500 cc, the patient should initially be straight catheterized (per physician order), avoiding urinary catheterization (Foley) placement if at all possible.
   3. If straight catheterization is performed after the scan, the amount of urine obtained should be recorded.

# Responsible Persons

Determine what nursing care positions will be able to be trained at your facility.

# Equipment

Equipment includes bladder scanner, scan head, plug, battery and stand, ultrasound transmission gel, and top-loading printout paper.

| BLADDER SCAN PROCEDURE\* | RATIONALE/EMPHASIS |
| --- | --- |
| 1. Put on clean (nonsterile) gloves. |  |
| 1. Clean off scanner head before and after each patient use according to manufacturer instructions using hospital-approved disinfectant. |  |
| 1. Check that battery is in place and probe is plugged in. |  |
| 1. Scan may be done with patient in sitting or supine position. |  |
| 1. Remove or adjust patient’s clothing to expose abdominal area. |  |
| 1. Turn bladder scanner on. Self-testing will display on panel as well as identifying buttons. |  |
| 1. Press scan and then note gender. (NOTE: If the patient is female and has had a hysterectomy, use the male key for gender. If the patient is very thin or obese, use more ultrasound gel. For patients with large amounts of lower abdominal hair, apply the gel directly to the skin. Advise the patient the gel will be cool.) |  |
| 1. Apply gel to the scanner head, being careful to remove air bubbles. |  |
| 1. Place scanner head about 1 inch above symphysis pubis, pointing slightly down toward the expected bladder location. Make sure the head of icon on the scan head is pointed towards the patient’s head. |  |
| 1. Press the “scan” button making sure to hold scanner steady until you hear a beep. The bladder scanner will display the volume measured and an aiming display with crosshairs. If the crosshairs are not centered on the bladder, adjust the probe and rescan until they are properly centered. |  |
| 1. When you are satisfied the results are accurate, press the “done” button. The bladder scan will display the largest volume measured for the longitudinal and horizontal areas. |  |
| 1. Press “print,” and the measurement will be printed on paper. |  |
| 1. Bladder Scan Safety/Helpful Tips |  |
| * 1. This scan should never be used for fetal heart tones. |  |
| * 1. Use care with suprapubic and pelvic surgical patients. | Scar tissue, surgical incisions, sutures, or staples can affect scan accuracy. |
| * 1. If the screen shows a “greater than” symbol (>) next to the bladder volume measurement, then you do not have the bladder within full range of the scan head, and the patient’s true bladder volume is greater than the volume displayed. To achieve an accurate measurement, reposition the scan head and repeat the scan. An exception occurs when the volume shown is greater than a specific threshold, e.g., 999 cc; in this case, the bladder is within full range of the instrument and the reading displayed is accurate. | In some instances, the bladder may be too full to scan accurately. Repositioning or re-aiming the scan head will do little to improve accuracy, but readings can still be clinically useful even if they underestimate true bladder volume. |
| * 1. The bladder scan computes the volume of the bladder based upon multiple cross-sectional images of the bladder. **Be sure to hold the scan head motionless during scans.** |  |
| * 1. The most accurate measurements are obtained when the patient is resting quietly in the supine position. |  |
| * 1. The accuracy of the result is compromised if the user does not obtain an optimal, reportable image. |  |
| * 1. The patient should not have a urinary catheter in the bladder. | This could affect the accuracy of the instrument by creating micro bubbles in the bladder. |
| 1. To save power, the bladder scan will turn itself off when not in use. |  |

\*Also refer to operator’s manual from the manufacturer.

# Bibliography

Portable bladder ultrasound: an evidence-based analysis. Ont Health Technol Assess Ser. 2006;6(11):1-51. PMID: 23074481.

ANA CAUTI Prevention Tool: <https://www.nursingworld.org/practice-policy/work-environment/health-safety/infection-prevention/ana-cauti-prevention-tool/>

Gupta SS, Irukulla PK, Shenoy MA, Nyemba V, Yacoub D, Kupfer Y. Successful strategy to decrease indwelling catheter utilization rates in an academic medical intensive care unit. Am J Infect Control. 2017;45(12):1349-1355.

Purvis S, Gion T, Kennedy G, et al. Catheter-associated urinary tract infection: a successful prevention effort employing a multipronged initiative at an academic medical center. J Nurs Care Qual. 2014;29(2):141-148.