

## Abstract Reproduction Form B-1

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Title (type in CAPITAL LETTERS) SCREENING FOR URINARY RETENTION ON A GERIATRIC  
REHABILITATION UNIT USING A PORTABLE ULTRASOUND  
BLADDER SCAN: A PROSPECTIVE CASE-CONTROL STUDY

**Aims of Study:** To determine (1) the prevalence of urinary retention (UR) in elderly patients admitted to a Geriatric Rehabilitation Unit (GRU), (2) the risk factors for UR in this population, (3) the reliability of the BladderScan BVI 2500+ ultrasound scanner to measure post void residual urine and (4) the clinical outcome of patients with UR.

**Methods:** Probable UR was defined as two consecutive ultrasound scans showing post void residual urine volumes of greater than 150 ml. Scans were followed by in/out catheterization to determine true post void residual urine (PVR). History of stroke, hip fracture, Parkinson's Disease, long standing diabetes, fecal impaction, prostate disease, cognitive impairment, impaired mobility, and anticholinergic medications were the independent variables used in the regression analysis.

**Results:** Nineteen of 167 people had UR (11.4%). The odds of UR were 11.19 times greater for people taking anticholinergic medications and 9.96 times greater for those with long standing diabetes ( $p < .05$ ). Fecal impaction and age increased the odds of UR by factors of 7.94 and 1.09 respectively ( $p < .05$ ). Paired scan and catheter volumes correlated at .87 and the mean absolute error was 101.17 ml.

**Conclusions:** The BladderScan BVI 2500+ ultrasound scanner provides conservative and reliable estimates of PVR. UR may be prevalent among more than 10% of frail elderly persons undergoing rehabilitation. The risk of UR is greatest in the presence of anticholinergic medications, long standing diabetes and fecal impaction. Intermittent catheterization and alpha blocking medication may quickly resolve UR in almost 70% of affected patients.