

TRENDS IN INPATIENT AND OUTPATIENT SURGICAL PROCEDURES FOR STRESS AND URGE INCONTINENCE 1998-2007, USA

Hypothesis / aims of study

With the advent of minimally invasive approaches there has been a substantial increase in the absolute number of surgical procedures for the management of urinary incontinence in both inpatient and outpatient settings over the past two decades.[1,2] It is not clear if the increase in the number of procedures is due to an increase in incontinence prevalence, incontinence diagnosis, or changes in management approaches. A recent study has shown that there is a decline in inpatient hospitalizations and an increase out patient procedures, but these data do not extend past the year 2000 [3].

The primary purpose of this analysis was to examine trends in performance of surgical procedures for the management of urinary incontinence in both inpatient and outpatient settings in the USA, using the Healthcare Cost and Utilization Project (HCUP) inpatient and ambulatory surgery databases.

Study design, materials and methods

The HCUP State Inpatient Databases (SID) and the HCUP State Ambulatory Surgery Databases (SASD) from 1998 through 2007 were used to examine the prevalence and trends in inpatient and outpatient surgical procedures for urinary incontinence.

In order to robustly examine the trends in type of procedure and setting where procedures are conducted, 8 states that provide both the SID and SASD were included in the analysis. The eight states (Colorado, Connecticut, Maryland, New Jersey, New York, South Carolina, Wisconsin and Florida) were selected to maximize the range of geographic representation and the number of years of data available.

Discharges from the inpatient and ambulatory surgery databases were identified for all women age 21 and older with a procedure coded using ICD-9-CM codes 58.93, 59.3-59.5, 59.72, 59.79, 70.5 and CPT codes 51715, 57288, 51840, 51992, 51990, 51845, 57220, 57289, 51841. These procedure codes were selected based on previous reports of surgical procedures for urinary incontinence [1] with additional procedure codes included as suggested in the literature.

Results

In 2007, there were 49,139 hospital and same-day surgery stays for women age 21 and older that included a surgical procedure to treat urinary incontinence. This was up from 39,663 total discharges in 1998 across the same 8 states. The rate of stress incontinence surgical procedures per 10,000 women 21 years and older increased from 16.9 in 1998 to 18.6 in 2008. Figure 1 illustrates the trends in the rate of inpatient and outpatient procedures for women overall, from 1998 to 2007. There is a marked shift from inpatient to outpatient treatment. Figure 2 highlights trends in urinary incontinence surgical procedure rates by age group. There is a notable increase in surgery rates among women age 35-49 from 14.2 in 1998 to 18.5 in 2007 (per 10,000). Surgery rates in the other four age groups remained relatively flat over the 10 year period.

Interpretation of results

The trend towards outpatient performance of incontinence surgery continues, likely a reflection of currently available minimally-invasive surgical approaches that allow quicker recovery and minimize the need for hospitalization. The highest rate of incontinence surgery continues to be among women aged 65-74 years, while the greatest increase in rate was found in the middle adulthood years. It is unclear whether increases in surgical volume are a result of altered access to treatment, availability of minimally invasive surgery, altered treatment strategies, or other unmeasured factors.

Implications for healthcare in the USA are important. As the US population ages, and procedures are better tolerated without an overnight stay, there is likely to be a continued increase in the number of older American women who will undergo outpatient incontinence surgery, and an increased need for incontinence specialists to care for these women.

Figure 1. Incontinence Surgical Procedure Rates by Setting, 1998-2007

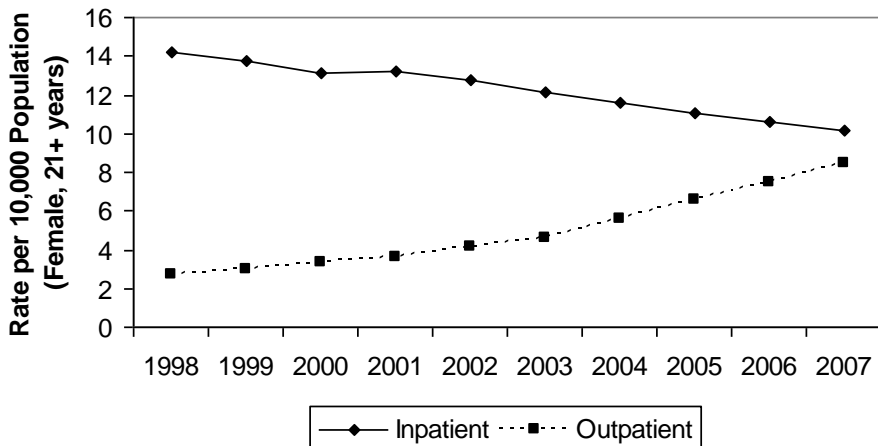
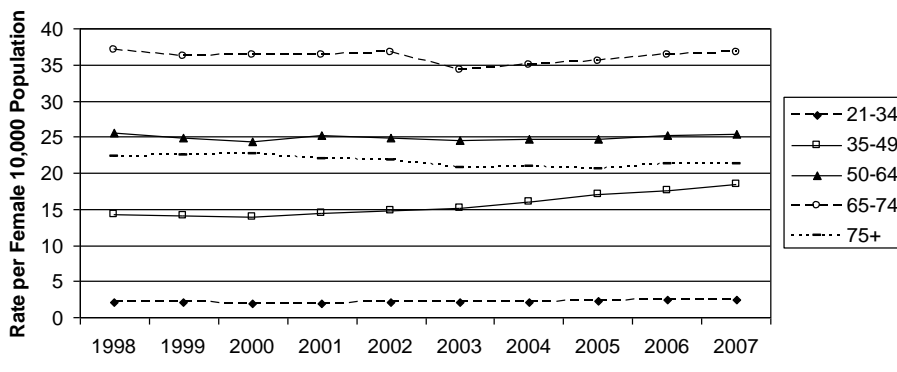


Figure 2. Incontinence Surgical Procedures Rates by Age, 1998-2007



Concluding message

The number of incontinence surgeries performed in the USA continues to increase, with a shift towards outpatient surgery. As the US population ages, this increase is likely to continue, and demand for incontinence specialists is likely to grow.

References

1. American Journal of Obstetrics and Gynecology 2003; 189: 70-75.
2. Urology 1998; 51: 355-361.
3. Journal of Urology; 2005; 173: 1065-1066.

Specify source of funding or grant	None
Is this a clinical trial?	No
What were the subjects in the study?	NONE