

Leave No Stone Unturned? – Negative Ureteroscopy Rates

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INTRODUCTION

A negative ureteroscopy (URS) occurs when a patient is taken to the operating room with the intent of removing a kidney/ureteral stone but does not because: a) the stone has already passed on its own; or b) the stone is not in the collecting system. In a single surgeon, retrospective chart review, Kreshover et al. had a negative URS rate of 9.8%, however to date no large population based studies have been performed. We aimed to determine the rate at which this might occur. Given a lifetime risk of kidney stone disease of 6-11% and annual medical expenditures of 2.1 billion dollars on stone disease, negative URS rates may have significant cost implications.

METHODS

Using the Office of Statewide Health Planning Database (OSHPD), a publically available database for all patients in California undergoing outpatient surgeries in 2008, we identified all patients with an ICD-9 diagnosis code for upper tract nephrolithiasis. We used CPT codes to identify all patients in this group who underwent diagnostic URS only versus those that underwent stone treatment during URS (laser lithotripsy or basketing). The negative URS rate was then calculated (diagnostic URS / URS with stone laser lithotripsy or basketing). Rates of negative URS were compared based on sex, race/ethnicity, age, and expected source of payment.

RESULTS

In California in 2008, 9,192 patients underwent ureteroscopic procedures with the diagnosis of upper tract stone disease. Of these, 897 patients underwent diagnostic URS. There were 8295 who underwent URS with laser lithotripsy or stone basketing. The rate of negative URS was 9.8%. There were no significant differences in the negative URS rate based on sex, race/ethnicity, or age as much of this data remained unknown. The negative URS rate did vary considerably with insurance type. Sub analysis of patients with only a primary diagnosis for upper tract nephrolithiasis did not change this rate.

ICD-9 codes

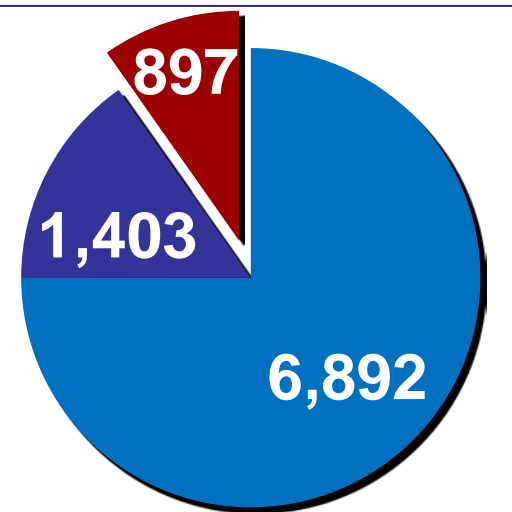
592.0 Calculus of Kidney
592.1 Calculus of Ureter
592.9 Kidney Stone, Unspecified
274.11 Nephrolithiasis, Uric Acid

Negative Ureteroscopy Rate

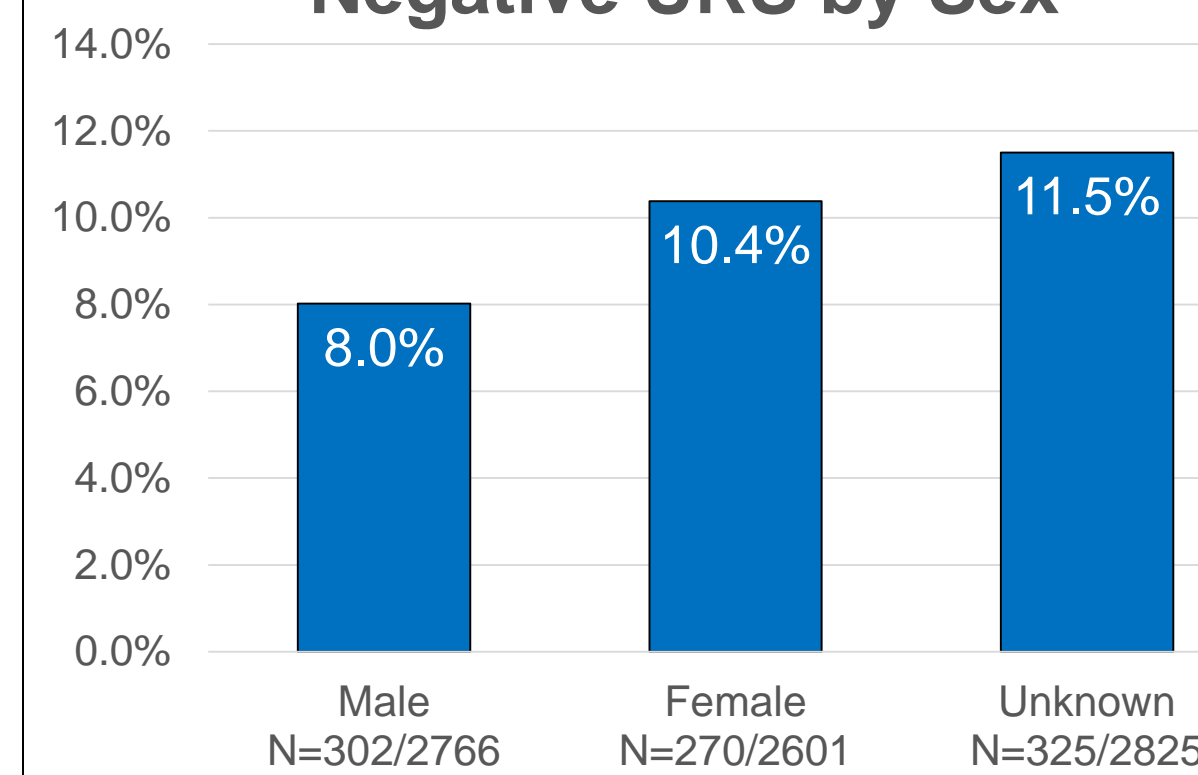
Negative URS = 897/9192
= **9.8%**

CPT codes

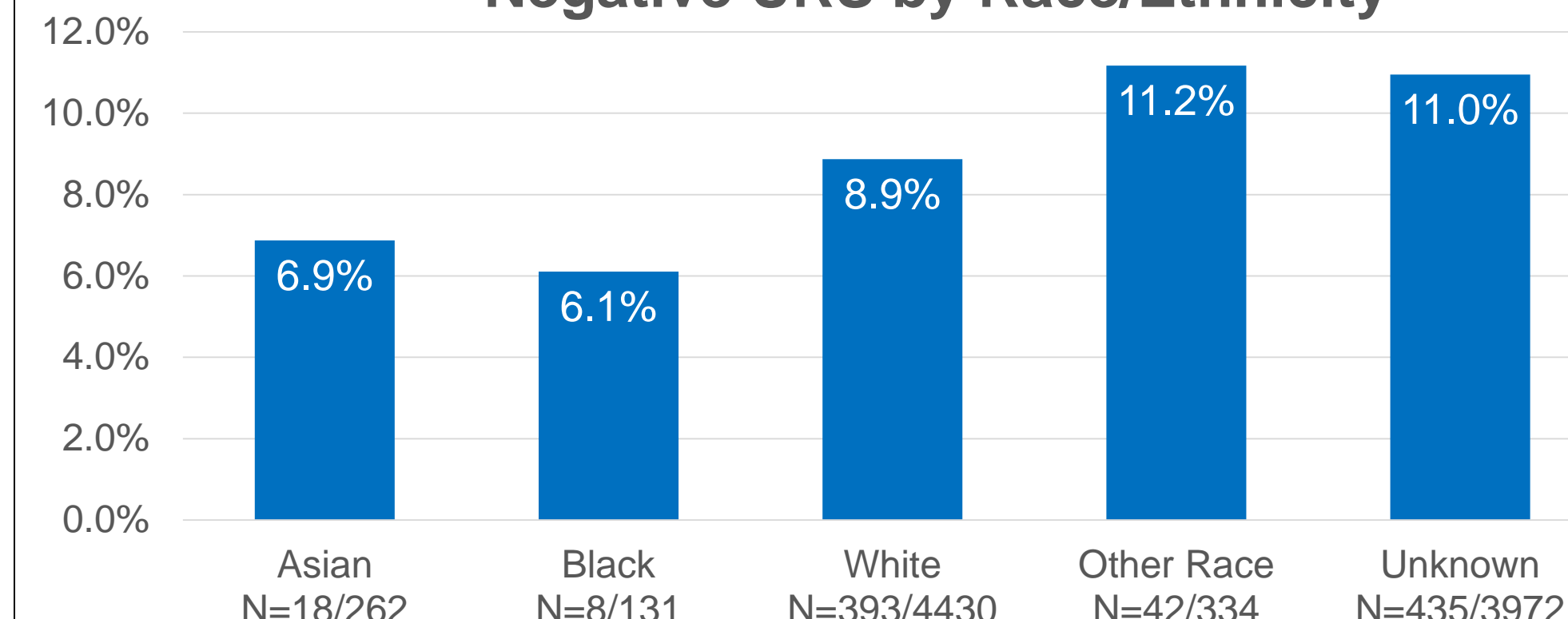
52353 – URS with Laser Lithotripsy	■
52352 – URS with Stone Removal	■
52351 – Diagnostic Ureteroscopy	■



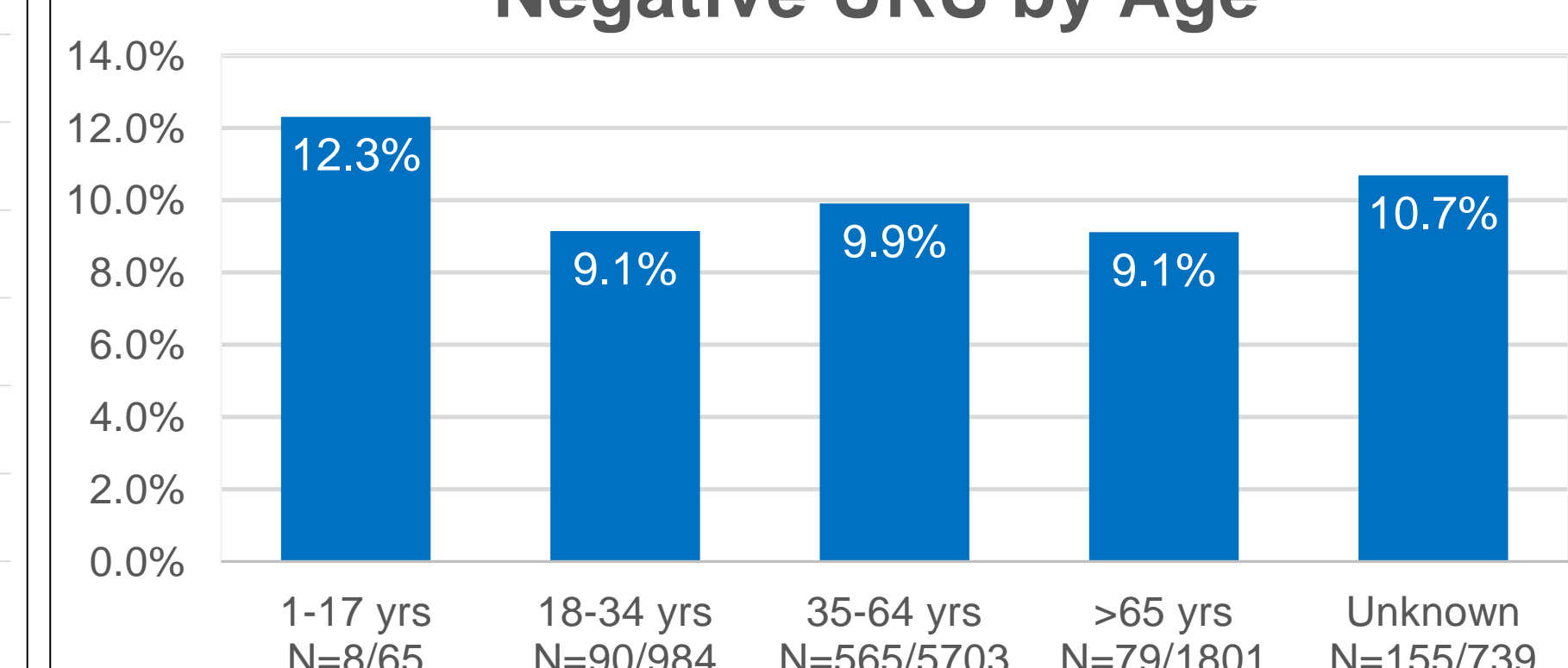
Negative URS by Sex



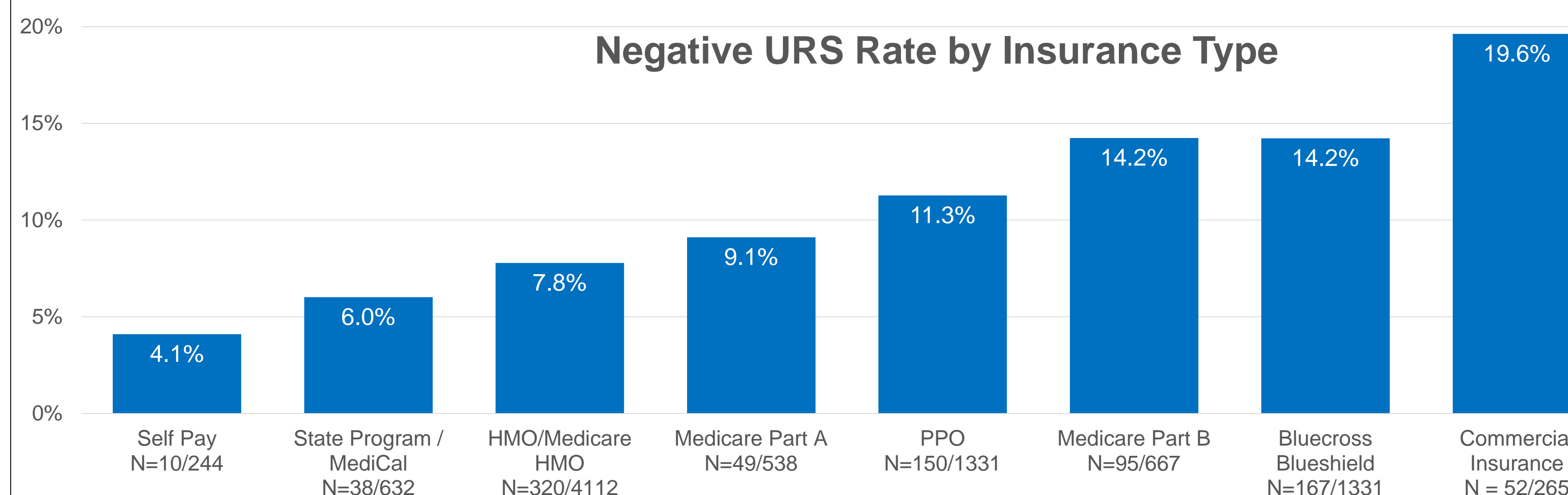
Negative URS by Race/Ethnicity



Negative URS by Age



Negative URS Rate by Insurance Type



CONCLUSION

The rate of negative URS is significant and it occurs in nearly 1/10 individuals undergoing URS for therapy of a stone. The possibility of negative URS should be considered when counseling patients pre-operatively. The source of payment may influence the rate of negative URS.