

## **ESTIMATING SODIUM INTAKE IN THE CLINIC: USE OF SPOT URINE MEASUREMENTS**

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Sodium restriction is important for hypertension control. Twenty-four hour urinary sodium excretion (24 UNa) is used to assess dietary sodium intake, but this method is prone to inaccuracy due to collection errors. We examined the correlation of spot urine sodium (spot UNa), spot urine sodium and creatinine ratio (spot UNa/Ucr) and 24 UNa.

Forty-eight remnant paired 24-hour urine and spot urine samples were collected from patients at the UAB nephrology clinic. Collections were deemed adequate based on 24 hr urine creatinine excretion per kg of body weight. Total volume of the 24 hr sample and patient weight were obtained from the medical record. Flame photometry was used to measure sodium concentration. Spot urine creatinine was measured using the Jaffe reaction. The protocol was approved by the UAB IRB.

Median 24 UNa was 126.9 mEq/24 hr (min 27.3, max 407.8), median spot UNa was 61.1 mEq/L (min 4.6, max 207.8) and median spot UNa/Ucr was 13.6 mEq/mg (min 1.2, max 36.6). Pearson's coefficient for 24 UNa versus spot UNa and spot UNa/Ucr was 0.29 ( $p = 0.05$ ) and 0.32 ( $p = 0.03$ ), respectively. No patients with a spot UNa/Ucr  $\leq 9.2$  had  $> 150$  mEq/L 24 UNa.

Spot UNa and spot UNa/Ucr were not accurate predictors of 24UNa. However, a UNa/Ucr ratio  $\leq 9.2$  may represent a threshold indicating adequately restricted sodium intake.