

# Nocturia: Why do People Void at Night?

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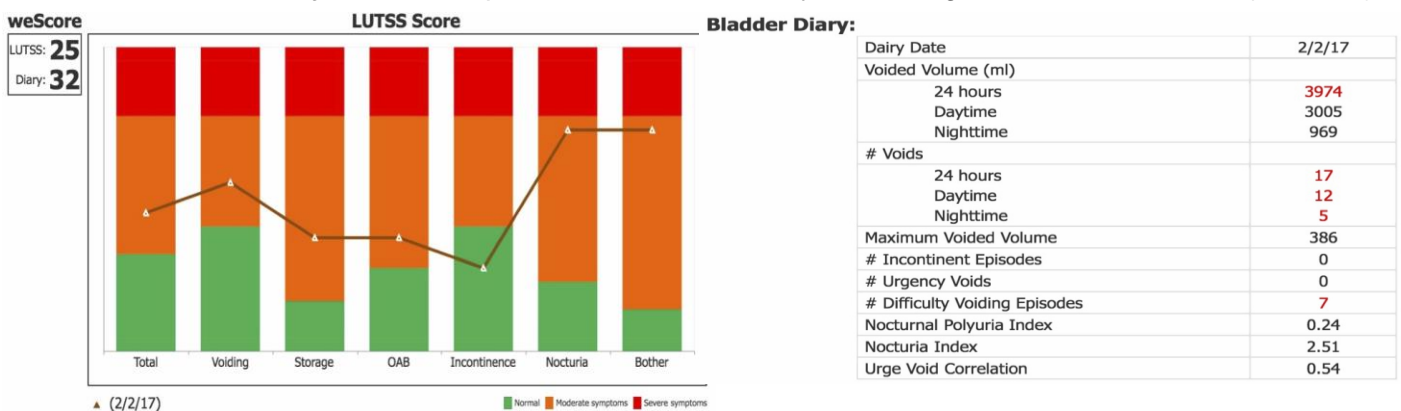
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## Hypothesis/ Aims of Study

- There are two reasons patients have nocturia – they are awakened by an urge to void or they awaken for some other reason and then void before going back to sleep.
- The aim of this study is to determine the relative contribution of each type of night-time void.

## Study Design/ Materials and Methods

- This is a retrospective review of patients who completed the Lower Urinary Tract Symptom Score (LUTSS) and a 24-hour bladder diary (24H BD) on a mobile app (Figure 1) or website.
- Each nocturnal void was designated primary or secondary nocturia:
  - **Primary nocturia** – patient was awakened by an urge to void; subdivided based on the Urge Perception Score (UPS) into:
    - urgency voids: severe urge or desperate urge (UPS = 3 or 4)
    - non-urgency voids: no urge, mild or moderate urge (UPS = 1 or 2).
  - **Secondary nocturia** - patient was awakened by something else and then voided (UPS = 0).



**Figure 1.** The total LUTSS and 5 sub-scores are color-coded to represent normal (green), moderate (orange), and severe (red) symptoms. The Bladder diary summary shows results of the 24-hour bladder diary with abnormalities in red.

## Results

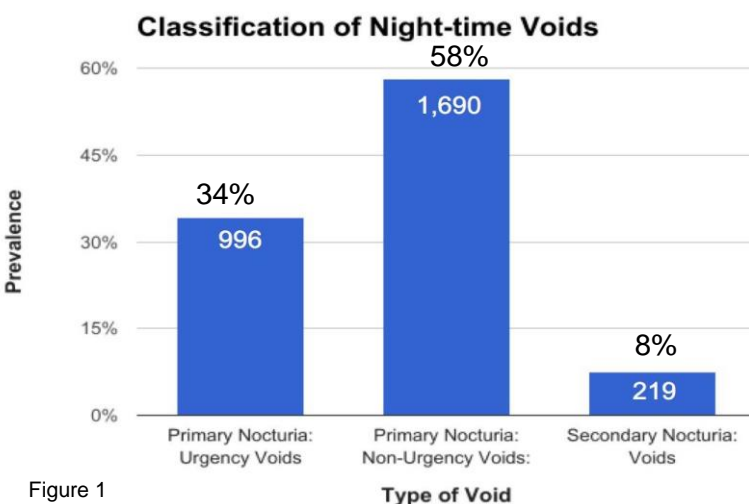


Figure 1

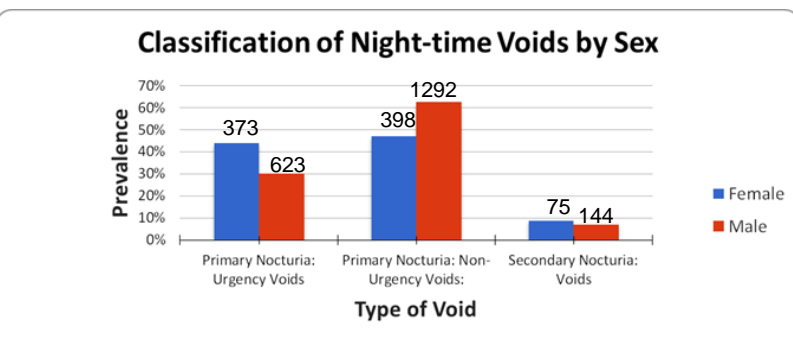


Figure 2

- 594 patients (204 women, 390 men) ages 12-99 (average 64, SD 18) completed 1,586 bladder diaries.
- 264 diaries were excluded leaving 1,321 diaries for analysis.
- 14,234 voids of which 3,014 (21%) were night-time voids.
- 109 excluded due to missing data leaving 2,905 nocturia voids (Figure 1).
- 846 female voids (29%) and 2,059 male voids (71%) (Figure 2).
- 92% primary nocturia voids comprised of:
  - 63% urgency voids
  - 37% non-urgency voids
- 8% secondary nocturia voids
  - All non-urgency voids

## Interpretation of Results/ Concluding Message

- Primary nocturia was seen in 92% of patients (patient is awakened by an urge to void) .
- Secondary nocturia was seen in 8% (patient was awakened by something other than an urge to void).
- Primary nocturia requires a diagnostic and therapeutic approach directed at the lower urinary tract.
- Secondary nocturia is likely to be a sleep disorder requiring a different evaluation and treatment program.

## Disclosure Statement

Dr. Blaivas is co-founder of SympTELLIGENCE Medical Informatics, LLC.