

## WHAT'S A CLINICIAN TO DO? BELIEVE THE PATIENT OR HER URINARY DIARY?

### Hypothesis / aims of study

Clinician and researchers use urinary diaries to quantify urinary incontinence. Urinary diaries require a high degree of patient compliance, particularly when recording for an extended time period. Urinary diaries have never been shown to be more accurate than simply asking a woman about her incontinence episode frequency. Additionally, urinary diaries do not reflect the impact of urinary incontinence for a particular woman.

The aim of this study was (1) to determine if the number of incontinence episodes recorded on a 7-day urinary diary correlate with patient recall of incontinent episodes over the last week and (2) to determine if quality of life impact affects this relationship.

### Study design, materials and methods

After IRB approval, we recruited women, who self-reported  $\geq 1$  urge incontinence episode per week to participate in a study comparing 2 consecutive weeks of a urinary diary. Participants were recruited from our tertiary care referral practice and from flyers placed around the medical center. All participants completed a 7-day diary for 2 consecutive weeks. At baseline and completion of the 2 weeks of recording urinary diaries, participants also completed the UDI-6 and IIQ-7, and responded to two recall questions: During that last seven days how many times did you accidentally leak urine 1) when you were performing some physical activity such a coughing, sneezing, lifting or exercise and 2) when you had the urge or the feeling that you needed to empty your bladder but you couldn't get to the toilet fast enough. SPSS Version 13 (Chicago, IL) was used for data analysis. Spearman's correlations were used to compare patient recall and diary record of incontinence episodes with measures of patient distress and quality of life impact.

### Results

Sixty-one consecutive participants had a mean age of 62 years (range 24-86) and most were Caucasian (98%). Table 1 below displays the median number of incontinence episodes reported by recall and diary at both time points.

Number of Incontinence Episodes	Time 1	Time 2	Spearman's $\rho$ , P value
Diary: Median (25 <sup>th</sup> -75 <sup>th</sup> %)	1.9 (.56-4.8)	1.1 (.31-5.5)	.921, <.005
Recall: Median (25 <sup>th</sup> -75 %)	6.5 (3, 30)	5 (3, 12)	.309, .059
Spearman's $\rho$ , P value	.655, .001	.504, .028	

There was only modest correlation between recall of incontinence episodes and the number of incontinence episodes recorded on diary. Incontinence episodes on two 7-day diaries were highly correlated, while subject's recall of incontinence episodes was poorly correlated.

When participant reported being only slightly or not bothered by urge incontinence on the UDI-7, there was high correlation between recall and diary ( $\rho=.812$ ,  $p=.014$ ); however, with increasing bother (moderate or great), recall and diary were not significantly correlated ( $\rho=.528$ ,  $p=.115$ ). Overall, IIQ-6 scores modestly correlated with recall ( $\rho=.611$ ,  $p<.0005$ ), but not diary the reports of incontinence episodes. Urinary Distress Inventory scores modestly correlated with both patient recall and diary record of incontinence episodes ( $\rho=.51$  and  $.46$ ,  $p=.001$ ).

### Interpretation of results

Our data suggests that women with urge incontinence either overestimate or under record their actual number of incontinence episodes on diary. This finding may have important clinical and research implications. Pelvic floor physicians have traditionally used urinary diaries as the "gold standard" for quantifying urinary incontinence episodes. However, the large discrepancy between patient recall and diary record in this study suggests that validation of the diary record is necessary as patients may experience five times more incontinence episodes than they record on diary. On the other hand, if the diary is correct

and women are overestimating incontinence episodes, actual number of incontinence episodes may not adequately reflect the consequence of urinary incontinence for that woman. The discrepancy between recall and diary record is even more pronounced in women who experience greater bother from their incontinence. This indicates that purely recording number of incontinence episodes is not an adequate method for quantifying urinary incontinence. Women whose daily activities are significantly impacted by their urinary incontinence are more likely to overestimate or under record incontinence episodes. Quality of life impact may be more related to a woman's recollections about her continence status than the number of incontinence episodes recorded in a diary.

#### Concluding message

Women with urge incontinence either overestimate or under record on diary their actual number of incontinence episodes, and this effect is more pronounced in women who are more bothered by their incontinence. Quality of life impact may be more related to a woman's recollections about her continence status than the number of incontinence episodes recorded in a diary. The magnitude and direction of this discrepancy deserves further study.

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