

## WEB-BASED EPIDEMIOLOGY OF URINARY INCONTINENCE (THE WEB-EPI UI STUDY): A COMPARISON OF WEB-COLLECTED DATA WITH PUBLISHED DATA FROM THE NORWEGIAN EPINCONT STUDY.

### Aims of Study

To assess whether web-based data collection can match classic epidemiological postal surveys, by comparing the web-collected data with data already published.

### Methods

We used a web-banner to invite women to join a women's health study. We focused the questionnaire on female urinary disorders as part of a women's health study on the Internet. One question sub-branched the main questionnaire in order to include web users into the same questionnaire as in the Norwegian EPINCONT study (1). Data were collected using the Inquisite software, version 3.1, exported, and then analysed with SPSS 11.5.

### Results

There were 1813 respondents. We excluded from further analysis 36 who declared themselves to be men, 19 who did not declare gender, and one response that was obviously nonsensical, leaving n=1757 for further analysis. Mean age ( $\pm$ SD) was 31,4 ( $\pm$ 9,8) years, median age 29, range 14-69 years.

The total prevalence (95% confidence interval (CI)) of urinary incontinence (UI) in our study was 19,5% (17,7%-21,4%) (n=343), and these responders were consequently branched into the UI-part of the study. Similarly, the total prevalence of urinary incontinence in the EPINCONT study was 25% (24,1%-25,2%). Comparing the WEP-EPI UI distribution with the EPINCONT study, we found the following comparative results, WEB-EPI UI (95% CI) vs. EPINCONT (95% CI), respectively: stress incontinence 40,9% (35,7%-46,1%) vs. 50% (49,1%-51,5%), urge incontinence 16,7% (12,8%-20,7%) vs. 11% (10,4%-11,9%), mixed incontinence 39,4% (34,2%-44,6%) vs. 36% (34,4%-36,7%), and incomplete answers 2,6% (1,2%-4,3%) vs. 3% (2,6%-3,4%).

In our study, the percentage of women with different degrees of severity index was distributed as follows: slight 33% (28,3%-38,4%) vs. 43% (41,5%-44,0%), moderate 39% (34,0%-44,4%) vs. 31% (30,4%-32,7%), and severe 28% (22,7%-32,2%) vs. 26% (24,6%-26,8%). Furthermore, the proportion that had had urinary leakage for 0-5 years was 64% (59,0%-69,2%) vs. 66% (64,7%-67,3%), for 5-10 years 20% (15,7%-24,3%) vs. 20% (18,8%-21,0%), and more than 10 years 16% (12,0%-19,8%) vs. 14% (13,1%-15,0%), respectively. Similarly, we found that 22% (18,2%-27,1%) had sought help from a physician, compared to 26% (25,3%-27,4%) in the EPINCONT study.

Finally we studied the 5-year age group distribution for the total prevalence of urinary incontinence, finding the following (WEP-EPI UI vs. EPINCONT): 20-24 years 9,3% (6,6%-12,7%) vs. 10% (9,0%-11,7%), 25-29 years 12% (9,1%-15,6%) vs. 14% (12,8%-15,8%), 30-34 years 23% (17,9%-27,1%) vs. 18% (16,7%-19,7%). 35-39 years 26% (20,3%-32,0%) vs. 21% (19,7%-22,7%), 40-44 years 33% (24,1%-41,4%) vs. 24% (22,4%-25,5%), 45-49 years 36% (25,9%-47,4%) vs. 28% (25,7%-29,6%), 50-54 years 32% (20,6%-45,6%) vs. 30% (28,5%-31,9%), 55-59 years 47% (29,1%-65,3%) vs. 28% (25,7%-29,6%), 60-64 years 35% (14,2%-31,7%) vs. 26% (24,2%-28,2%).

### Conclusions

Based on the distribution of the same variables used in the EPINCONT study, our web-based data collection seems to suffer from some recruitment bias in the highest age categories. The analysis based on 5-year age categories seems to be biased towards higher prevalence of urinary leakage as age increases, and with low numbers of respondents and subsequent wide confidence intervals. We also found more serious incontinence, and more urge or mixed incontinence, which may affect quality of life in a larger degree. These findings may indicate

that it might be difficult to perform web-based epidemiology, as it seems that we actually attract respondents that have problems with the disorder.

### **References**

1. Hannestad YS, Rortveit G, Sandvik H, Hunskaar S. A community-based epidemiological survey of female urinary incontinence: the Norwegian EPINCONT study. Epidemiology of Incontinence in the County of Nord-Trøndelag. J Clin Epidemiol 2000;53(11):1150-7.