

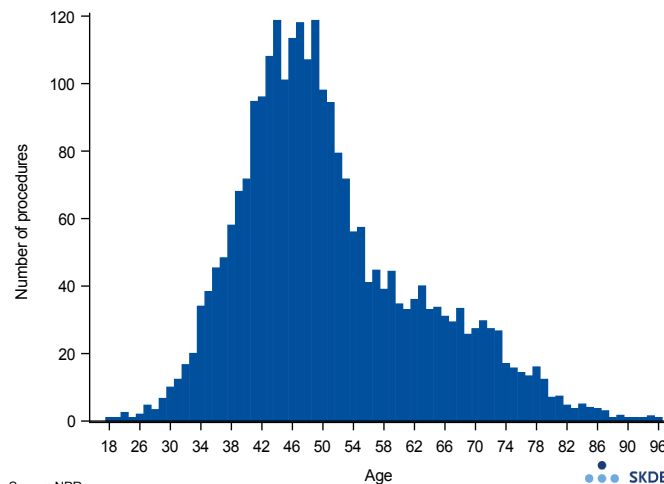
Urinary incontinence (leaking) is common among women. Figures for Norway show that approx. 25% of women over 20 years of age experience some degree of urinary incontinence, and the condition causes significant problems for just over one third of these women. It becomes more common with increasing age.

### Background

Urinary incontinence is most common in women who have given birth, but can also occur in women who have not. Urinary incontinence can reduce quality of life, affect their social life and limit physical activity.

There are two main types of urinary incontinence. Stress incontinence is triggered by physical activity and exertion, including sneezing and coughing. The cause is usually weak pelvic muscles and connecting tissue following pregnancy and childbirth, or hormonal changes after menopause. Urge incontinence, also known as urgency incontinence, is the involuntary passing of urine in connection with a sudden and intense need to urinate. It is usually caused by the muscle in the wall of the bladder being overactive.

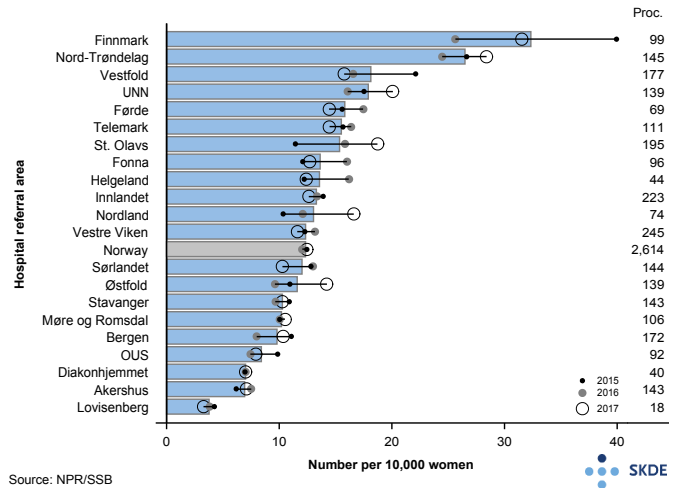
Stress incontinence can be improved by systematic pelvic floor exercises. Surgical treatment of stress incontinence is done by putting in a synthetic sling to support the urethra. The sling will prevent the urethra from moving during coughing and exertion. If surgery is not an option, an alternative method involves injecting a gelatinous mass (expander) around the urethra. Urge incontinence can be relieved through bladder training and pharmacological treatment. All overweight patients with urinary incontinence would benefit from losing weight. Patients with postmenopausal vaginal dryness can benefit from topical oestrogen treatment, as oestrogen can also keep the mucous membranes in the bladder and urethra thick and strong.



Source: NPR  
**Number of procedures for urinary incontinence broken down by age, average per year for the period 2015–2017.**

### Results

During the period 2015–2017, about 2,500 incontinence operations per year were performed in Norway. It was particularly women aged 45–55 years who underwent procedures for urinary incontinence. During the period 2015–2017, the average age of patients was 50.9 years.



Source: NPR/SSB  
**Number of urinary incontinence procedures per 10,000 women, adjusted for age, average per year 2015–2017 broken down by hospital referral area. Average number of procedures on the right.**

The number of urinary incontinence procedures per 10,000 women varies greatly between hospital referral areas. On average, women living in Finnmark hospital referral area had more than eight times as many operations for incontinence as women living in the Lovisenberg area, and about 4.5 times as many operations as women living in the hospital referral areas of Diakonhjemmet and Akershus. If we exclude the two hospital referral areas with the highest rates (Finnmark and Nord-Trøndelag) and Lovisenberg hospital referral area, which is at the bottom of the list, the geographical variation is still high. Women living in Vestfold and UNN hospital referral areas had about 2.5 times as many operations for incontinence as women in the hospital referral areas of Akershus and Diakonhjemmet.

The geographical variation in surgical treatment of urinary incontinence is considerable, even if we exclude the hospital referral areas that had the highest and lowest rates (Finnmark, Nord-Trøndelag and Lovisenberg).

### Comments

Scores on three quality indicators from the Norwegian Female Incontinence Registry (NFIR) have been compared for the six institutions that treat the vast majority of women living in the hospital referral areas of Finnmark, Vestfold and Lovisenberg.

The overall scores are quite similar, despite the fact that the rate was eight times higher in Finnmark than in Lovisenberg hospital referral area, and 4.5 times higher in Vestfold than in the Lovisenberg area.

There is no known geographical variation in morbidity that can explain the geographical variation in surgical treatment. Nor is it likely that women’s preferences with respect to conservative treatment versus surgery, or random variation can explain geographical variation on the scale observed. The variation must therefore be deemed to be unwarranted.