

## Background

- Two-thirds of women suffering from stress urinary incontinence (SUI) reported a negative impact on quality of life (QoL)
- Urine leakage affects physical, psychosocial and economic well-being [1]
- SUI can lead to less social contacts and less physical activity
- Therefore, SUI can be associated with more comorbidities
- More comorbidities mean an additional economic burden
- Urinary incontinence is the most common reason for a referral to a nursing home
- As SUI increases with age it can be expected that demographic changes in the population's age structure will yield an increased prevalence in the future
- SUI implies a substantial economic burden on the health care and social services
- There is a need for well-reported, guideline driven, disease-related economic studies [2]

## Aim

- To estimate the health status and the health costs of women with SUI living in a German speaking part of Switzerland

## Method

- This cost-of-illness study (COI) was embedded in a RCT (n=96) exploring the effect of two pelvic floor muscle training protocols [3]
- The COI study followed the Consolidated Health Economic Evaluation Standards (CHEERS) statement
- A prevalence-based COI with a societal perspective and a bottom-up approach was applied
- Baseline demographics, comorbidities and cost data were collected during the 16-weeks of physiotherapy intervention
- Participants reported direct medical (e.g. treatment costs), direct non-medical (e.g. incontinence aids), and indirect costs (e.g. productivity loss) with a self-reported diary
- Cost calculation: unit prices, Swiss Federal Office of Public Health, billing service tariffs of the University Hospital of Berne
- Parametric statistics for demographics and cost data
- Frequency analysis: for comorbidities, direct medical and non-medical health care unit consumption and for the indirect costs

Table 1: Cost accounting (CHF) over four months from the perspective of the society

Direct medical costs	Societal costs (mean, SD)
Physician	245.42 (379.46)
Specialist	403.95 (1'531.94)
Physiotherapy	483.71 (98.97)
Complimentary medicine	154.05 (285.59)
Dentist	84.12 (124.94)
Medical examination	115.79 (278.09)
Medication	95.05 (223.38)
Surgery	273.95 (1'216.45)
<b>Subtotal direct medical costs</b>	<b>1'856.04 (148.84)</b>

Extrapolating this 16-week period cost to a yearly cost yielded CHF 5'258.- (dentist and complimentary medicine excluded), which was about **30% higher as compared to the general Swiss female population**

Direct non-medical costs	Societal costs (mean, SD)
Incontinence aids	23.49 (39.17)
Extra clothes	1.95 (6.25)
Transportation	7.08 (30.80)
<b>Subtotal direct non-medical costs</b>	<b>32.52 (11.25)</b>

Indirect costs	Societal costs (mean, SD)
Loss of efficiency	105.75 (328.00) <sup>a</sup>
Loss of physical activity	215.93 (455.31) <sup>a</sup>
Loss of social contact	45.32 (275.68) <sup>a</sup>
<b>Subtotal indirect costs</b>	<b>367.00 (86.51)</b>

<b>Total costs</b>	<b>2'255.56 (147.48)</b>
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All costs are expressed in 2018 Swiss Francs (CHF)

<sup>a</sup> Costs leisure time: CHF 23.29 per hour  
(x42h/week x16weeks) = CHF 15'650.88 (100%)

## Results

- Data from 37 participants could be analyzed
- The most commonly reported problems were back pain (54%), allergies (46%), and joint (32%) problems
- Episodes of depression (24%) and insomnia (19%) were also reported
- The prevalence of hypertonia, diabetes, cancer, osteoarthritis and arthritis, back pain, joint problems, allergy, asthma, COPD and thyroid disorders was higher in the study sample than in the general Swiss female population of the similar age group 45 to 54 years
- 51% of the participants consulted a medical doctor (1 to 10 visits), 43% a specialist (1 to 16 visits) while 41% consumed complimentary medicine treatments (1 to 12 visits)
- Prevalence of drug consumption = 70% (1 to 9 different drugs)
- 11% were less efficient while working and 30% less physical active because of SUI. One participant had less social contacts

## Conclusion

- Based on a 16-weeks observation period, this study provided data on health care use, comorbidities, QoL as well as costs of SUI in a German speaking part of Switzerland
- The assessed cost data can be used as input data by health economists while modelling
- The high economic burden of SUI requires cost-effective preventive actions and clinical treatments
- Physiotherapy is recommended by the International Consultation on Incontinence (ICI) as first-line therapy in the treatment of all forms of female urinary incontinence since its effectiveness could be shown
- Consequently, physiotherapy could contribute to a reduction in the cost of health care
- Therefore, in Switzerland the cost-effectiveness of physiotherapy programs in this patient group should be investigated

## References

- [1] Hampel C et al. Eur Urol. 2004  
[2] Drummond M A et al. Int J Technol Assess Health Care. 2005  
[3] Luginbuehl H et al. Trials. 2015

## Ethics

Ethics committee approval (Ethics Committee of the Canton of Bern, reference number 249/14 on 12 November 2014), in accordance with the Declaration of Helsinki and the Swiss Human Research Act, and written informed consent.

## Conflict of interest

None

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