

ANALYSIS OF UROGENITAL TOILETING PRACTICES IN NURSING HOMES AND THEIR IMPACT ON THE INCIDENCE OF BACTERIURIA

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BACKGROUND

Urinary tract infections (UTIs)

- Frequent among nursing home (NH) residents

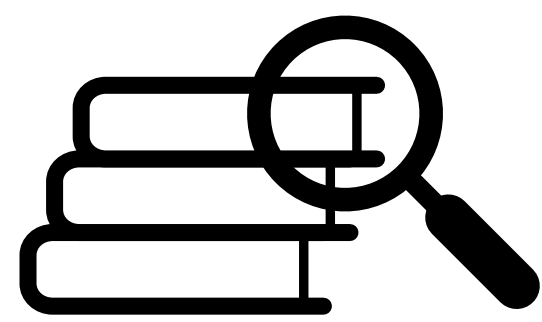
Guidelines

- No clear recommendation on urogenital toileting found

Everyday care

- NH residents are dependent on toileting aid
- Different toileting techniques are possible
- Unknown impact on UTI frequency

AIMS



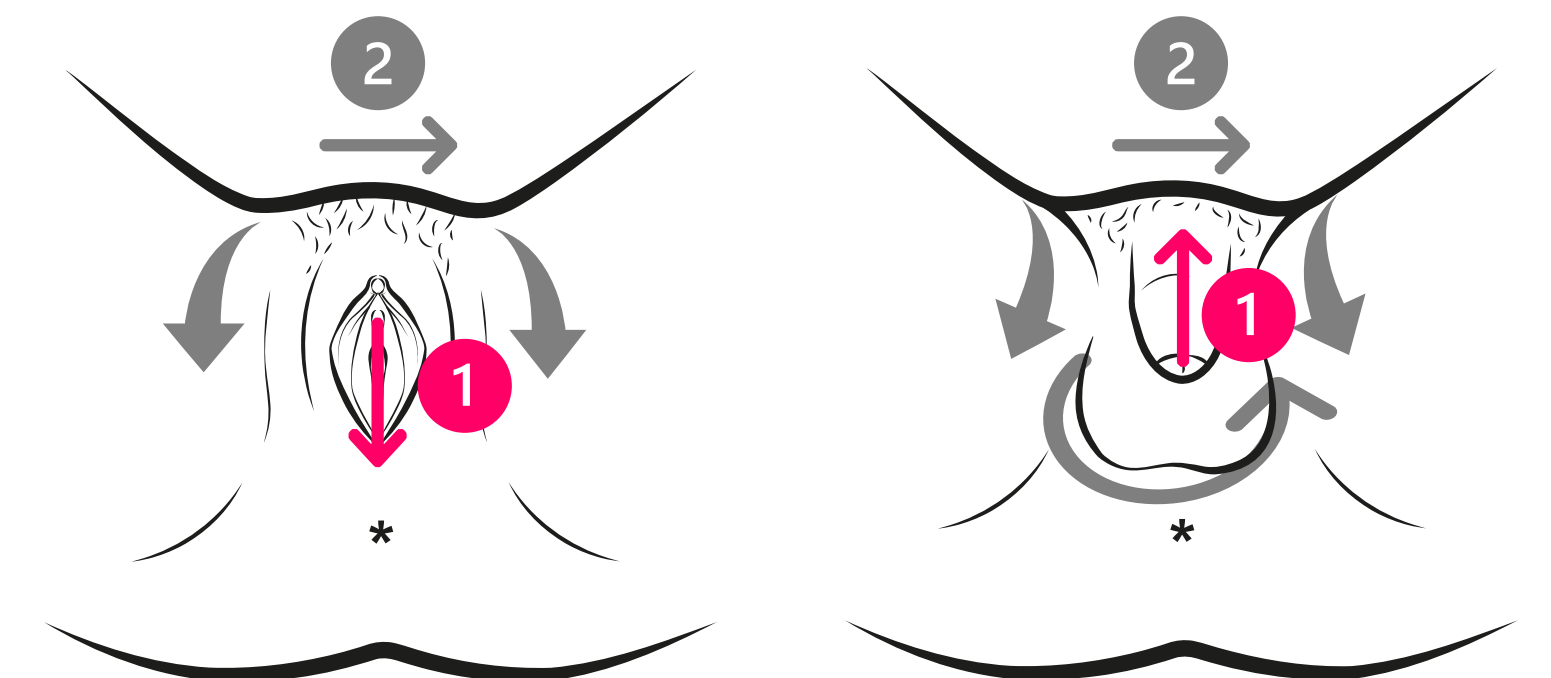
How is urogenital toileting performed in NHs of canton Vaud ?
Are there any associations with UTI frequency ?

METHODS

UROGENITAL TOILETING TECHNIQUE ACCORDING TO DIRECTION OF CLEANING

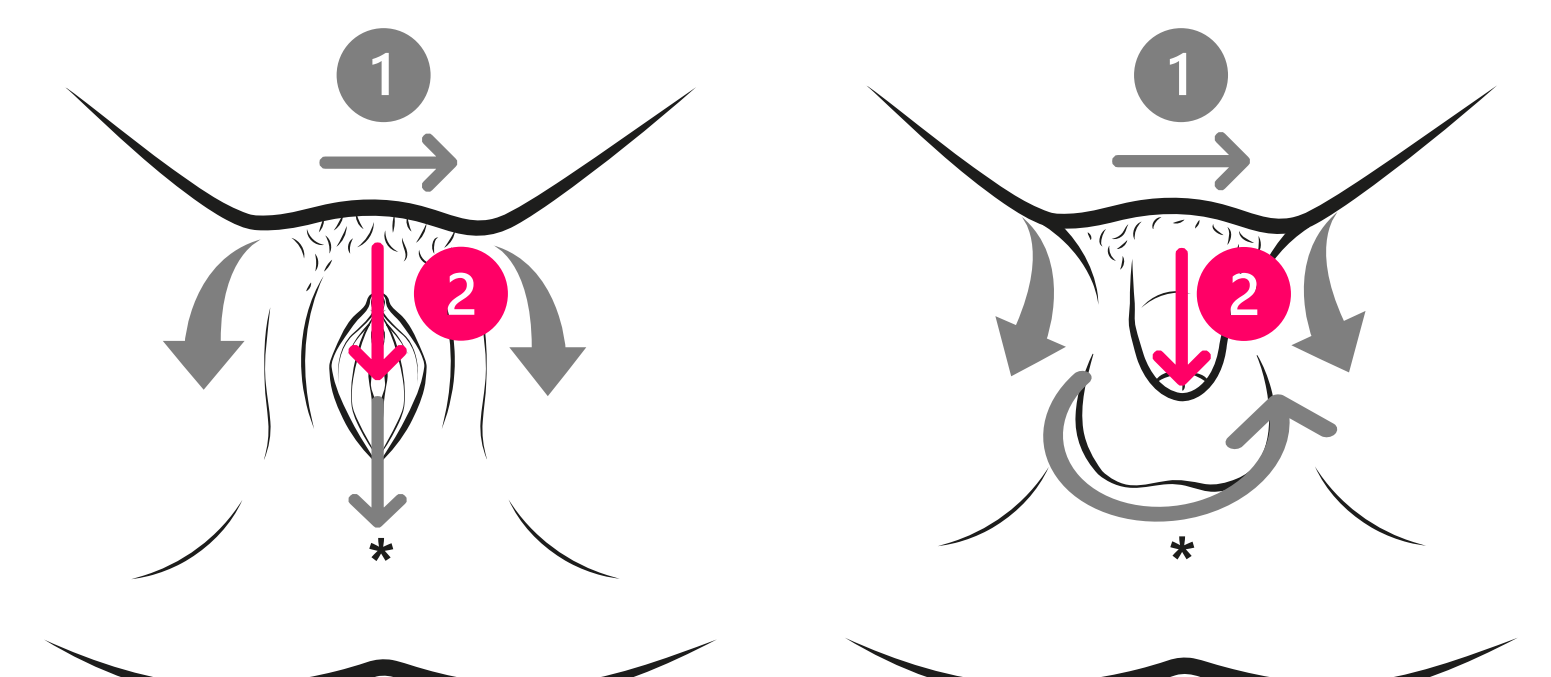
Toileting technique

A Clean-to-dirty direction



Toileting technique

B Dirty-to-clean direction



Cross-sectional survey

Urogenital toileting techniques employed in the NH from 2017 to 2023

Urinary culture dataset from HPCi Vaud

Results from positive urinary cultures of NH residents

Analysis

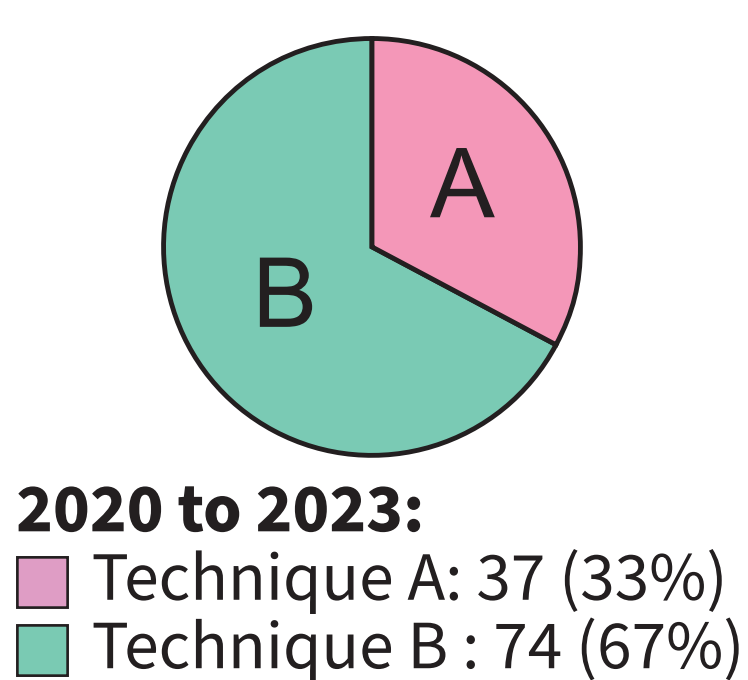
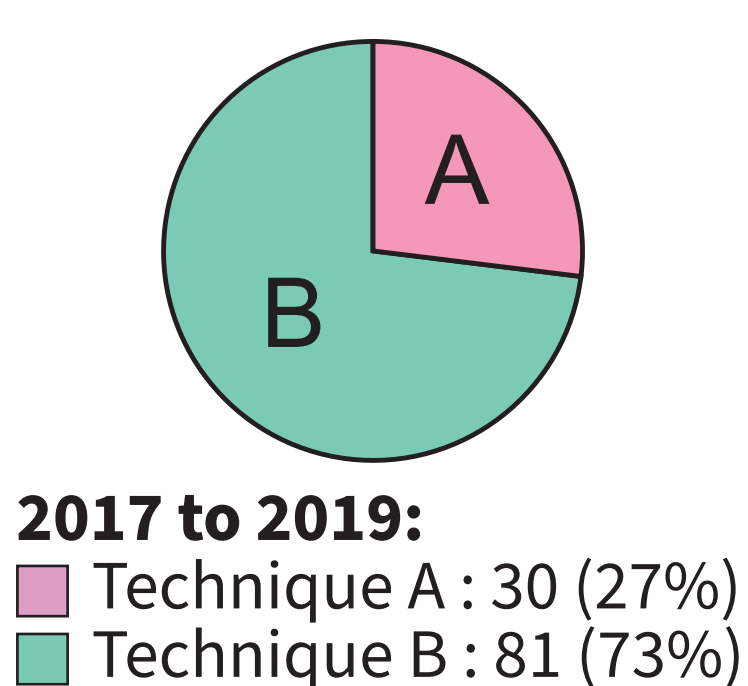
Association between techniques used and outcomes

Linear mixed models

Outcomes:
- N of cultures/N of residents
- Proportion of contaminated samples (> 3 microorganisms)

RESULTS

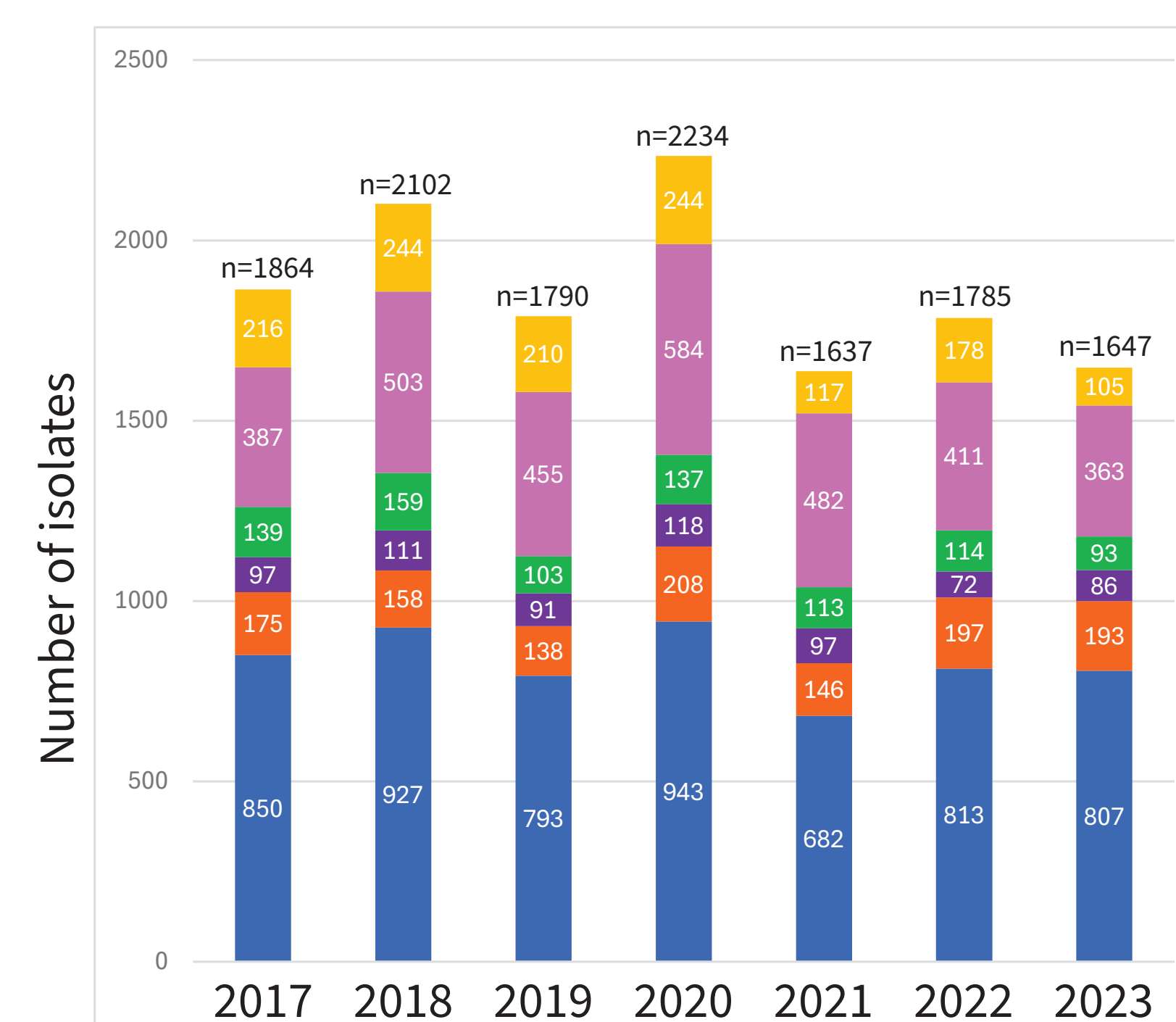
Toileting technique survey participation 111/120 NHs (92.5%)



Year	Number of positive cultures/resident Mean (SD*)		Percentage of contaminated cultures Mean % (SD)	
	Technique A	Technique B	Technique A	Technique B
2017	0.91 (1.7)	0.51 (0.52)	4.11 (9.25)	14.4 (17.9)
2018	0.84 (1.44)	0.56 (0.59)	3.14 (10.2)	14.4 (17.9)
2019	0.66 (0.87)	0.5 (0.41)	3.97 (9.37)	13.5 (18.5)
2020	0.65 (0.6)	0.62 (0.49)	6.92 (12.8)	16.4 (22.1)
2021	0.57 (0.59)	0.49 (0.53)	5.9 (15.3)	12.3 (18.4)
2022	0.84 (1.3)	0.45 (0.3)	5.15 (12.1)	12.6 (16.8)
2023	0.49 (0.25)	0.43 (0.34)	5.97 (16)	12.3 (22.8)

*SD: Standard deviation

Complete microbiological data 50 NHs (45%)



No association found between the technique used and the culture-to-resident ratio

$\beta = 0.16$, 95 CI* % : -0.09 – 0.42, $p = 0.21$ (reference = Technique B)

*CI: Confidence interval

Clean-to-dirty toileting (Technique A) was associated with a significantly decreased frequency of culture contamination

$\beta = -0.09$, 95 CI % : -0.16 – -0.02, $p = 0.01$ (reference = Technique B)

CONCLUSIONS

- These results could suggest that urogenital toileting technique might have an impact on the contamination of urine samples: Dirty-to-clean toileting was associated with increased contaminated samples.
- Our study could not establish a link between the technique used and the incidence of bacteriuria.
- Further studies are needed to investigate if the toileting technique has an influence on UTIs among the elderly living in nursing home facilities.

