

1 **Appendix 1**

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Table S1. EPE characteristics.

Baseline characteristics	EPE-positive (n=81)	EPE-negative (n=62)
Total numbers of EPE*	82	65
Species ¹ (%)		
- <i>Escherichia coli</i>	78 (95)	56 (86)
- <i>Klebsiella</i> spp.	4 (5)	8 (13)
- <i>Proteus</i> spp.	0 (0)	1 (2)
Phenotype* (%)		
-ESBL class A	77 (94)	57 (86)
-AmpC	3 (4)	7 (11)
-ESBL class A + AmpC	2 (2)	1 (2)
Antibiotic resistance* (%) ²		
-ciprofloxacin	18 (22)	6 (10)
-trimethoprim/sulfamethoxazole	8 (10)	16 (26)
-ciprofloxacin + trimethoprim/sulfamethoxazole	44 (54)	27 (44)
-Susceptible to ciprofloxacin + trimetoprim/sulfamethoxazole	12 (15)	16 (25)

¹All data were collected at the time of inclusion, *i.e.*, when faecal culture was obtained, except for* which denotes original EPE-positive culture. All percentages are rounded up to the nearest integer.

Abbreviations: ESBL = Extended spectrum β-lactamase; EPE = Extended spectrum β-lactamase producing *Enterobacteriaceae*. AmpC = ampicillinase C

²Total number of strains in the ESBL-positive group and ESBL-negative group 82 and 65, respectively.

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Table S2. Baseline characteristics of the study population based on medical records and questionnaires regarding diseases classified according to Charlson comorbidity index

Baseline characteristic	EPE-positive (n=76)	EPE-negative (n=67)	P values
Charlson comorbidity index, median (range)	1 (0-7)	0 (0-5)	
Diabetes mellitus (%)	14 (19)	5 (8)	0.082
Liver disease (%)	0 (0)	1 (2)	0.469
Malignant cancer (%)	11 (15)	13 (20)	0.504
Acquired immunodeficiency syndrome (%)	0 (0)	0 (0)	
Chronic kidney disease (%)	3 (4)	2 (3)	1.000
Congestive heart failure (%)	7 (10)	1 (2)	0.065
Previous myocardial infarction (%)	6 (8)	4 (6)	0.749
Chronic obstructive pulmonary disease (%)	5 (7)	7 (11)	0.549
Peripheral vascular disease (%)	3 (4)	2 (3)	1.000
Stroke or transient ischemic attack (%)	7 (10)	5 (8)	0.769
Hemiplegia (%)	4 (6)	1 (2)	0.369
Connective tissue- or autoimmune disease (%)	3 (4)	2 (3)	1.000
Peptic ulcer (%)	3 (4)	1 (2)	0.622

Charlson comorbidity index according to original reference and validation.^{42,43} Excluded variables from original index; age and dementia as the latter is a criterion of exclusion in our study. All calculations are based on the weighted data. All counts are rounded to the nearest integer. Due to rounding, there are small variations in the number of patients included in each test. All percentages are rounded up to the nearest integer. ESBL = Extended spectrum β-lactamase.

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Table S3. Baseline characteristics of the study population based on questionnaires.

Baseline characteristics	Responding ¹ no (%)	EPE-positive ² no (%)	EPE-negative ³ no (%)
Travel to Africa and/or Asia within 2 years	122 (87)	18 (27)	24 (44)
Abdominal pain and/or altered bowel habits	124 (89)	24 (34)	26 (47)
Domestic household animal	124 (89)	23 (34)	20 (36)
Occupation	117 (84)		
-Unemployed/sick leave		3 (5)	2 (4)
-Working		22 (34)	21 (44)
-Studying		4 (6)	0 (0)
-Retired		36 (54)	29 (58)
Number of persons in household	121 (86)		
-Single household		13 (20)	17 (32)
-2 persons		47 (72)	27 (50)
-3 persons		4 (6)	4 (7)
-More than 3 persons		2 (3)	7 (13)
Known EPE-carrier in household ⁴	114 (81)	3 (5)	1 (2)
Knowledge of EPE-carriage	122 (87)	37 (57)	24 (44)
Vegetarian	123 (88)	1 (2)	0 (0)
Post-secondary education	121 (86)	35 (54)	25 (46)

All data were collected originating at time of inclusion, *i.e.*, when fecal culture was collected. ¹Number of patients responding to the questionnaire of 140 possible. ²Percentage calculated based on the total amount of replies within the cohort consisting of ESBL-positive patients. ³Percentage calculated based on the total number of replies within the cohort of ESBL-negative patients. ⁴Other than patient included in the study. All percentages are rounded up to the nearest integer. ESBL = Extended spectrum β -lactamase. EPE = Extended spectrum β -lactamase producing *Enterobacteriaceae*.

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Table S4. Comparison of baseline characteristics between the patients included in the study and patients unwilling to participate

Baseline characteristic	Patients included (n=143)	Patients not included (n=677)	P values
Age, median (range)	67 (19-87)	60	
Female sex (%)	92 (64)	456 (67)	0.4858
Charlson comorbidity index, median (range)	0 (0-7)	0 (0-8)	
History of EPE-infection (%)*	116 (81)	458 (68)	0,001
Urological intervention within 6 months ¹ (%)*	36 (25)	129 (19)	0,097
Resistance against ciprofloxacin + trimethoprim/sulfamethoxazole (%)*	71 (50)	250 (37)	0.01

Charlson comorbidity index according to original reference and validation. Excluded variables from original index; age and dementia as the latter is a criterion of exclusion in our study. All percentages are rounded up to the nearest integer. ESBL = Extended spectrum β -lactamase.

¹Minor or major invasive procedure on bladder, prostate and/or kidney and cystoscopy. EPE = Extended spectrum β -lactamase producing *Enterobacteriaceae*. *Variable based on preliminary regression analysis.

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Table S5. Computed statistical weights

Variable	Weight
History of EPE-infection and Bacteria resistant to both Ciprofloxacin and Trimethoprim/Sulfamethoxazole ¹	0.6976
History of EPE-infection and Bacteria not resistant to both Ciprofloxacin and Trimethoprim/Sulfamethoxazole	1.0070
No history of EPE-infection and Bacteria resistant to both Ciprofloxacin and Trimethoprim/Sulfamethoxazole	1.0771
No history of EPE-infection and Bacteria not resistant to both Ciprofloxacin and Trimethoprim/Sulfamethoxazole	2.4589

All data were collected originating at time of inclusion, *i.e.*, when fecal culture was collected, except ¹ which denotes original EPE-positive culture. EPE = Extended spectrum β -lactamase producing *Enterobacteriaceae*.

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26 Variable coding – Steering document

27 Dependent variable

28 *ESBL-positive* (1): Prevalence of EPE-strain in at least one fecal culture collected with a
29 minimum time period of three months from the first EPE positive culture.

30 *ESBL-negative* (0): EPE negative in fecal culture on follow-up.

31 Independent variables, bacterial characteristics at original EPE positive culture

32 *Bacterial species*: *Escherichia coli* (1) / Other species (0)

33 *Phenotype*: ESBL class A (1) / AmpC (0)

34 *Antibiotic resistance*: Ciprofloxacin (1) / Trimethoprim/Sulfamethoxazole (2) / Ciprofloxacin
35 + Trimethoprim/Sulfamethoxazole (3) / Susceptible to Ciprofloxacin +
36 Trimethoprim/Sulfamethoxazole (0)

37 *Place of infection and/or colonization*: Urine (1) / Rectum (2) / Blood (0)

38 *Infection or colonization*: Infection (1) / Colonization (0)

39 Independent variables at the time of inclusion, *i.e.* submitted fecal sample

40 *Sex*: Female (1) / Male (0)

41 *Age*: ≥ 70 years (1) / < 70 years (0)

42 *EPE-infection and/or colonization prior to January 2016*: Yes (1) / No (0)

43 *Urological intervention*: (Maximum six months prior to inclusion. Interventions including
44 minor and/or major surgery on bladder, prostate and/or kidney and cystoscopy) Yes (1) / No
45 (0)

46 *Inflammatory bowel disease*: Yes (1) / No (0)

47 *Charlson comorbidity index*: (According to original Charlson minus age and dementia) points
48 are coded as variables, *i.e.* 0=0, 1=1 and so forth.

49 *Inpatient hospital care*: (Maximum two years prior to inclusion) Yes (1) / No (0)

- 50 *Urinary catheter or intermittent clean catheterization:* Yes (1) / No (0)
- 51 *Antibiotic treatment:* (Maximum two years prior to inclusion) Yes (1) / No (0)
- 52 *Overall medications:* 1-2 medications (1) / 3 or more medications (2) / No medications (0)
- 53 *Ongoing proton pump inhibitor treatment:* Yes (1) / No (0)
- 54 *Ongoing immunosuppressive treatment:* (Including corticosteroids and methotrexate) Yes (1)
- 55 / No (0)
- 56 **Independent variables at the time of inclusion, i.e. submitted fecal sample. Data solely**
- 57 **from questionnaires**
- 58 *International travel:* (Maximum two years prior to inclusion outside the Nordic countries)
- 59 Europe (1) / Asia (2) / Africa (3) / North America (4) / South America (5) / Antarctica (6) /
- 60 Oceania (7) / No international travel (0)
- 61 *Abdominal pain and/or altered bowel habits:* Yes (1) / No (0)
- 62 *Domestic animal:* Yes (1) / No (0)
- 63 *Occupation:* Working (1) / Studying (2) / Retired (3) / Unemployed or sick leave (0)
- 64 *Number of persons in household:* Two persons (1) / Three persons (2) / More than three
- 65 persons (3) / Single household (0)
- 66 *Known EPE carrier in household:* Yes (1) / No (0)
- 67 *Knowledge of EPE-carriage:* Yes (1) / No (0)
- 68 *Vegetarian:* Yes (1) / No (0)
- 69 *Post-secondary education:* Yes (1) / No (0)
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79 The authors have no conflict of interest to disclose.

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