

A demographic description of women with uncomplicated urinary tract infection in England: a primary care electronic health record and notes review

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OBJECTIVES

To describe the age, ethnicity, and treatment of women with uncomplicated urinary tract infections (uUTIs) using electronic health records (EHR) and a notes review for patients from a large primary care network, covering 32 practices in southeast England.

KEY FINDINGS

uUTI occurrence showed a bimodal age distribution peaking between the ages of 21 to 30 years and again at ≥70 years. Clinicians largely adhered to NICE prescribing guidelines for uUTI, using first-choice options of trimethoprim or nitrofurantoin.

CONCLUSIONS

Utilising EHR data to obtain routinely collected data alongside a notes review facilitates detailed cohort analyses.

BACKGROUND

- Urinary tract infections (UTI) are common bacterial infections and are classified as either complicated or uncomplicated [1].
- Uncomplicated UTI (uUTI) are symptomatic and localised in non-pregnant females without anatomical or functional urinary tract abnormalities or significant comorbidities.
- A uUTI can be non-recurrent or recurrent, i.e., repeat infection twice within a 6-month period or three times within a 12-month period.

METHODS

- A primary care EHR from 32 practices in southeast England was used to describe female patients with uUTI aged ≥12 years between October 2021 and September 2022.
- Patients' notes were reviewed by clinical staff. Demographic characteristics and antibiotic treatments were described.

RESULTS

- 974 patients had a non-recurrent uUTI, and 289 had a recurrent uUTI.
- uUTI occurred most among patients aged 21-30 years (~30%), decreased by age decade, and increased again among patients aged ≥70 years (Table 1).

Characteristic	Recurrent	Non-recurrent
Total, N	289	974
Age		
Mean (SD)	46.2 (21.9)	43.4 (20.3)
Median (IQR)	42 (32.5)	38 (30)
Range (min - max)	13 - 99	12 - 98
Ethnicity, N (%)		
White	197 (68.2)	587 (60.3)
Black	16 (5.5)	90 (9.2)
South Asian	44 (15.2)	197 (20.2)
Mixed	11 (3.8)	32 (3.3)
Other	15 (5.2)	51 (5.2)
Unknown	6 (2.1)	17 (1.7)

Table 1. Age and ethnicity of patients stratified by recurrent or non-recurrent uUTI

- In this sample, patients of white ethnicities made up 68% of recurrent uUTIs and 60% non-recurrent uUTIs.
- Conversely, a higher proportion of patients of South Asian or Black ethnicities, were observed amongst those with non-recurrent uUTI than recurrent uUTI: South Asian ethnicities (20% and 15%, respectively) Black ethnicities (9.2% and 5.5%, respectively).

RESULTS (CONTINUED)

- This difference was greater when stratified by age; the proportion of those with non-recurrent uUTI was greater (42%) for females of minority ethnicities and under 45 years, than the proportion with recurrent uUTI (31%),
- While the opposite was true for those of white ethnicities under 45 years, who made up 56% of non-recurrent uUTIs and 66% recurrent.
- Occurrence of uUTI showed a similar pattern among people of white and non-white ethnicities when stratified by both recurrence and age (Figure 1).

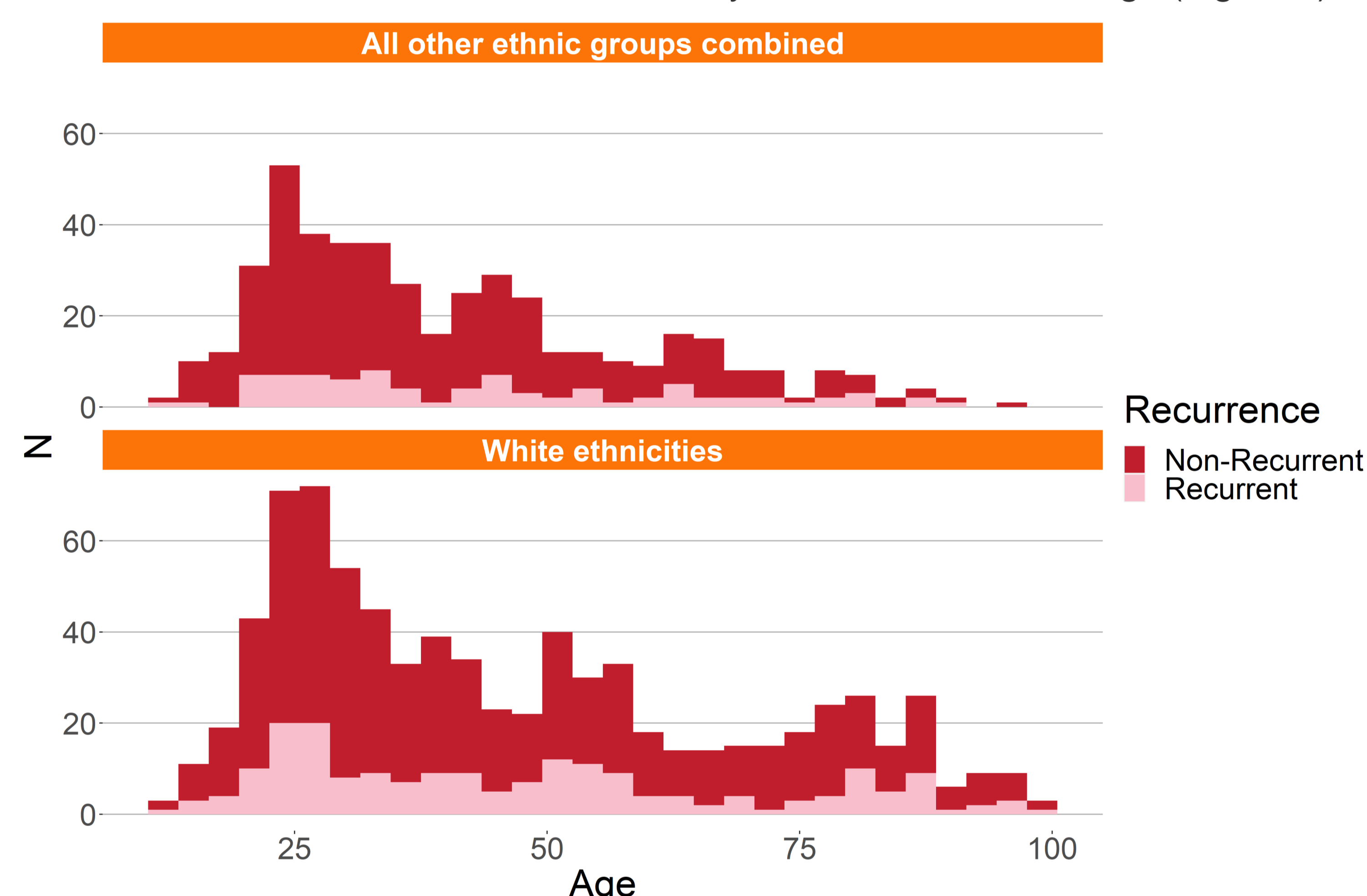


Figure 1. Age profile of patients stratified by ethnicity and recurrent and non-recurrent uUTI

- Treatments for all uUTI stratified by age are shown in Table 2.
- The two most common treatments were nitrofurantoin and trimethoprim, in line with NICE prescribing guidelines [2].

Treatment, N (%)	<45 years	≥45 years
Nitrofurantoin	579 (76.1)	341 (67.8)
Trimethoprim	86 (11.3)	78 (15.5)
Cefalexin	42 (5.5)	22 (4.4)
Co-amoxiclav	22 (2.9)	11 (2.2)
Ciprofloxacin	15 (2.0)	14 (2.8)
Amoxicillin	9 (1.2)	11 (2.2)
Other*	8 (1.1)	26 (5.2)

Table 2. Treatments among patients with recurrent and non-recurrent uUTIs. *Other are those treated with Fosfomycin, Gentamicin, or Pivmecillinam

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DISCLOSURES

Operose Health were paid by CorEvitas to complete this study.

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