Failure to implement hospital antimicrobial prescribing guidelines: experience in another UK academic centre

J. Mahungu1, O. Fajemisin1 and I. C. J. W. Bowler2*

1Department of Pharmacy, Oxford Radcliffe Hospitals NHS Trust, The John Radcliffe Hospital, Headington, Oxford OX3 9DU, UK; and 2Department of Microbiology, Oxford Radcliffe Hospitals NHS Trust, The John Radcliffe Hospital, Headington, Oxford OX3 9DU, UK

Keywords: antibiotic policy, urinary tract infection, UTI, treatment

Sir,
Ali et al.,1 recently reported poor compliance with prescribing guidelines for the treatment of community-acquired pneumonia and urinary tract infection (UTI) in two UK academic hospital groups. We would like to report the results of a prospective audit of the management of UTI in our Trust, which is also an academic centre.

The aim of the audit was to determine whether physicians were managing UTIs in adult inpatients according to the Trust guideline. The guideline set out criteria for allocation of patients into clinical categories (uncomplicated/complicated UTI), and advised on the interpretation of the point of care testing (POCT), when to send a sample for culture, and choice and duration of empirical antibiotic therapy based on the local epidemiology of antibiotic resistance in Escherichia coli. It was written by microbiologists, infectious disease physicians and pharmacists. It was approved by the Trust’s Medicines Advisory Committee, and had been distributed in paper format to all Consultants about a year before the audit. It was available to all staff in electronic format via the hospital intranet.

Data were collected prospectively for 100 consecutive adult acute general medical patients with a clinical diagnosis (intention to treat) of UTI. These were identified by daily ward review by one of the authors and by monitoring urine samples sent to the laboratory for culture. Of 70 female and 30 male patients, 51 had community-acquired UTI (diagnosis made within 48 h of admission) and 49 were hospital acquired. Thirty-one patients had catheter-related UTI (18 female), 64 patients had complicated UTI and 36 had uncomplicated disease.

Diagnostic tests
In 64 patients the results of POCT (leucocyte esterase and nitrite) were recorded in their medical notes (target 100). In 23 patients the POCT results were only recorded in the nursing notes, and in 13 patients there was no record of a POCT. Ninety-two patients had a urine sample sent for culture (target 100). The results of 16 urine cultures were documented in the medical notes (target 100). In the 92 patients where a urine culture was sent, 57 (62%) were non-diagnostic, growing either mixed flora or ‘no significant growth’. E. coli was the most frequently identified pathogen, growing in 23 of 35 samples where a pathogen was identified.

Empirical antibiotic choice
Of the 64 patients with complicated UTI, 30 (47%) were treated empirically with nitrofurantoin (target 0%—the guideline recommends ciprofloxacin 500 mg twice a day, or co-amoxiclav 625 mg three times a day as a second-line option). Of the 36 patients with uncomplicated UTI, 4 (11%) were treated with ciprofloxacin 500 mg twice a day (target 0%—the guideline recommends empirical treatment with nitrofurantoin 50 mg four times a day first line with ciprofloxacin 100 mg twice a day as a second line option). Empirical treatment was amended in only nine patients.

Duration of therapy
Of the 64 patients with complicated UTI, 35 (55%) were treated for fewer than 7 days (target 0% <7 days: the Trust guideline recommends 7–14 days). Of the 36 patients with uncomplicated UTI, 25 (69%) received more than 3 days of therapy (target 0% >3 days: the Trust guideline recommends 3 days). Intended duration of therapy was documented in 57 treatment episodes (target 100%).

Conclusions
Despite the fact that UTI is a common infection and a local guideline for the management of patients with the condition is available, documentation of investigations and results in our institution is poor. Empirical antibiotic therapy is often inappropriate and is rarely modified. Duration of therapy in many cases does not match the clinical categorization of complicated/uncomplicated disease. Electronic prescribing, incorporating algorithms derived from agreed treatment guidelines may help to improve compliance.2

Acknowledgement
Data in this letter were presented in poster format at the Eleventh Federation of Infection Societies Meeting, Cardiff, 2004.

Transparency declarations
None to declare.

References