Proceedings of the British Pharmacological Society at http://www.pA2online.org/abstracts/Vol11Issue3abst021P.pdf

Poor knowledge of their medicines linked to increased self-reported adverse drug reactions in patients with acute medical problems

Ejaz Cheema[1,2], Kiran Bal[1,3], John Watkins[1], Magdy Sakr[2,1], Donald RJ Singer[1,2]. [1]University of Warwick, Coventry, UK, [2]University Hospital Coventry and Warwick, Coventry, UK, [3]University of Kingston, Kingston, UK

Introduction: Serious adverse drug reactions (ADRs) impose a major clinical and cost burden on acute hospital services (1). There is significant NHS investment in community pharmacy aimed at improving patient knowledge about their medicines through Medication Use Reviews and other schemes. We investigated the relationship between patients' knowledge and sources of information about their medicines, and self-reported ADRs.

Methods: Medicines reconciliation has been mandatory in the NHS since 2007. In this study approved by the UHCW Audit Department, we investigated the importance of patients' knowledge about their treatment. We interviewed patients who presented with an acute medical problem to the Emergency Department at University Hospital (UHCW), a large teaching hospital during a continuous 10 day period, based on eligibility and capacity to participate. Of 268 patients approached, 22 were not taking medicines and 58 were not well enough to participate through lack of capacity or severity of their illness. Data on their medicines was obtained from 188 patients (87 male and 101 female, age range 17-96 years). Patients completed a questionnaire designed by our multi-disciplinary team, the format of some questions adapted from the Yellow Card form (2). Patients were asked to provide reasons, names, and doses for their treatment(s) (including over the counter (OTC) products) and to record any ADRs they recalled experiencing.

Results: The number of current medications for the 188 patients on treatment at the time of study ranged from 1 to 12. Eighty two (44%) patients reported using OTC medicines, mainly paracetamol and NSAIDs. Thirty seven (20%) patients did not know reasons for prescribed medicines. Only 8 patients reported recalling advice from a pharmacist and 85 (45 %) did not recall any advice on possible adverse effects of drugs. Fifty one (27%) patients recalled 65 ADRs, with 10 patients reporting multiple ADRs. Three patients, reported an ADR as the cause of their current acute medical presentation. Forty one patients recalled one ADR, 8 two ADRs and 2 patients four ADRs. Antibiotics (chiefly penicillins) were reported responsible for 14 ADRs, 7 due to opioid analgesics (codeine or tramadol), and 6 caused by NSAIDs. Other classes of medications reported as contributing to ADRs were statins, anti-coagulants, calcium channel blockers, diuretics and anti-psychotic drugs. The ADRs reported included GI bleeds, anaphylactic shock, severe rashes, gout and severe myalgia (ciprofloxacillin). We identified two important risk factors for reporting ADRs: being unaware of why medicines were prescribed (Odds Ratio 3.9 (95% CI 1.7-8.9), P=0.001, Fisher's Exact Test) and not recalling warnings about possible adverse effects (OR 12.2 (95%CI 4.9-30.8) P<0.001).

Conclusions: We identified a high prevalence of recalled ADRs, with increased ADR

risk inversely linked to patient knowledge of their medicines. Only 1 in 20 patients recalled pharmacist advice about their medicines. This important study stresses the need to evaluate more effective ways for pharmacists and other health professionals to improve patients' knowledge of their medicines within strategy to reduce the incidence of serious, preventable ADRs.

1. Pirmohamed M et al, Br Med J. 329:15, 2004.

2. Medicines and Healthcare Products Regulatory Agency. http://yellowcard.mhra.gov.uk/ Accessed 6.09.13