

**P1331**

**Paper Poster Session**

**News on outpatient antibiotic prescribing quality**

**A population-based national study of the patterns of antimicrobial use for urinary tract infection in the community (Scotland)**

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**Background:** The threat of antimicrobial resistance has been recognised as one of the preeminent concerns for the future treatment of infections. However, the relationship between antimicrobial consumption and resistance is complex. Community use represents the bulk, approximately 80%, of antimicrobial prescriptions within the UK, with the majority of these antibiotics being prescribed for the treatment of UTIs

**Material/methods:** Using data linkage of extant National datasets, over a 4 year period, 2009-2012, data were extracted and linked from the following datasets: dispensed prescribing data, ECOSSE laboratory dataset for bacteraemia samples, hospitalisation records, and death certification. We identified a cohort of patients prescribed one of 5 sentinel antibiotics usually used to treat UTIs, and describe the epidemiology of community prescribing for UTIs and identify subsequent predictors of antimicrobial resistance.

**Results:** There were 1,099,405 patients aged 16-100 identified as receiving at least one prescription for the 5 sentinel antibiotics (amoxicillin, co-amoxiclav, ciprofloxacin, nitrofurantoin and trimethoprim). There were 71.5% females in the cohort with a mean age for all patients of 51.9 years. 21.7% of the cohort had 5 or more antibiotic courses, with 5.6% having 11 or more courses of antibiotics over the period of the study. The majority of patients with 11 or more prescriptions had a combination of the five sentinel antibiotics prescribed. There were a total of 121,716 patients, who had an organism isolated and had sensitivity testing performed. Of these, 36,482 had an *E.coli* isolated and tested for resistance to one of the 5 sentinel antibiotics. Resistance to any of the 5 sentinel antibiotics in *E.coli* was found in 25,715 (70.5%) patients. Categorisation of patients with isolates initially sensitive to a sentinel antibiotic, which subsequently became resistant was completed.

**Conclusions:** This is the first study in the UK using a national linked patient level data set that describes the population receiving at least one antibiotic used for the treatment of UTIs. Descriptions of patient characteristics, patterns of antibiotic use, including long durations of use and use of multiple antibiotics within the same episode and antimicrobial resistances are highlighted Long term use shows that repeat prescriptions were of different types of antibiotic and that patients tended not to be prescribed the same antibiotic repeatedly. This data set will be used for future appropriate regression modelling.